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ome Effects of Soap on the Skin

JAMES M. NORTHINGTON, M.D., *Editor-in-Chief*

Ordinary soap removes most transient flora from the skin but resident flora, which are rarely pathogenic, usually remain. Allergy to soap is probably rare, since many hand eczemas attributed to soap continue indefinitely even when soap is avoided. Soap-based barrier creams should not be used.◀

In the Watson Smith Lecture delivered at the Royal College of Physicians of London this year, Dr. F. Ray Bettley shed light in many dark places of diagnosis and treatment, which light will be welcomed gladly by many a family doctor.

To the Victorians cleanliness came next to godliness, and the consumption of soap in Britain increased enormously with advances in chemical techniques of the industrial revolution. Pear's soap carried the testimonial of three prominent dermatologists in concert — Erasmus Wilson, James Startin, and John Milton, the founder of St. John's Hospital for Diseases of the Skin. The position has now altered in that other cleansers are available.

It has been found that the antiseptic action varied according to fatty-acid content and with the bacteria studied. Thus, oleate and linoleate had negligible action in respect of Salm. typhi but were effective against pneumococci, while palmitate and stearate soaps were effective against both organisms. The ordinary soaps contain a variety of fatty acids which should give them good antiseptic action against streptococci, pneumococci, C. diphtheriae, meningococci, and gonococci. The gram-negative rods E. coli, Salm. typhi, and the paratyphoid group are more resistant. Staph. aureus appears to be completely resistant to soap. In respect to streptococci, investigators found the antiseptic action of 1 in 400 soap solution was greater than of 1 in 160 lysol or 1 in 1000 mercury bichloride.

Removing Contamination by Washing

Perhaps more important than killing micro-organisms is their

removal from the skin by washing. As to cultures and infected secretions deposited on the skin, five minute's ordinary washing sufficed to remove contamination with streptococci, but staphylococci could be recovered after prolonged periods of washing. In another test hands and forearms were scrubbed with soap and water for one minute in 14 consecutive bowls. The number of organisms removed by each successive washing became less and less; about half the total was removed in the first six minutes and two-thirds in the first 10 minutes. The whole bacterial flora are never removed, leading to the concept of resident and transient flora. The former are rarely pathogenic. Staph. aureus, Mic. luteus, M. epidermidis, and others, after 10 to 12 washings, continued to appear in the water.

The transient flora are, apart from washing, at the peril of the self-sterilizing power of the skin. When the hands are recently contaminated by handling infected material they can be easily cleaned and pathogenic organisms removed by thorough washing with ordinary soap.

To remove water soluble dirt a sufficient quantity of water is presumably all that is required. For oily or greasy dirt the usual fat solvents serve but are not suitable for repeated use. The alternative is to remove fatty material by emulsifying it

The importance of the colloi nature of soap solution and moval of solid dirt particles the formation of sorpt on c pounds with soap mole ules been stressed. In the pr sence alkali, dirt particles and the s face to be cleansed both carry negative change. Most solid d particles and bacteria are a negatively charged, so that th are actively repelled from t keratin surface in the prese of an alkali, but are attrac and held to the skin at an a pH, when the skin surface positively charged.

The active part of the so molecule, the fatty-acid anion, so bears a negative charge; th it is repelled by the skin surfa and remains free in the solu Probably the most effici cleanser for the skin should an anionic detergent and sho be alkaline. Ordinary soap f fills this requirement; and t alkalinity of soap, which is so o ten regarded as a disadvanta makes a valuable contribution its cleansing power on the ski

Normal pH of Skin

Ordinary washing with toi soap raises the pH of the sk surface by 1 to 1.5 units and takes more than three hours f the normal reaction to be r stored. Evidently much will d pend upon the thoroughness a

e dur tion of washing, the nount c soap used, and wheth- small mounts of soap remain the kin from inadequate nsing.

Long xposure, e.g., washing shes ra ses the pH of the skin more han four hours. In can- en wo kers exposed several nes du ing the day the recov- y perio d was prolonged to 19 urs, in some it was only on ys off hat the pH of the skin turned to normal.

As to how often soap causes rmatitis there is great diver- nce of opinion. It is easy to be- ve that excessive use of soap ay lead to degreasing of the rneous layer, to cracking, and nce to some degree of soreness. me have stated that 13 per nt of their cases of industrial rmatitis were due to soap or similar cleansers. A series of 9 housewives with soap der- atitis had patchy vesicular ec- mas involving the backs of the nds and one or several fingers.

Allergy to Soap is Rare

The part played by soap in in- ividual cases is extremely dif- cult to assess. Specific allergic nsitivity to soap is very un- mmon, so that patch tests are no value in any given case. In study of the effect of two kinds soap (a neutral non-soap de- rgent and an alkaline non-soap etergent) on 22 patients with hand eruptions which had been attributed to soap, one hand was immersed in 0.5 per cent soap or detergent solution for half an hour daily and compared with the other, which was immersed in plain water. The same entirely negative results were obtained in 45 subjects when the exposure was increased to half an hour daily.

In the wards a 5 per cent toilet soap and 5 per cent pure potassium palmitate was used as a cleanser in the treatment of eczema, seborrheic dermatitis, and psoriasis. The solution was rubbed on to the affected skin twice daily in order to remove applications such as Lassar's paste and zinc cream. The effect of these soap solutions was compared with that of applic. deterg. *N.F.* 1957 and liquid paraffin. Over a trial period of one month neither patients nor nurses nor doctors observed any irritant property in the soap solutions, except in contact with ulcerated surfaces. Their use was not continued because other cleansers were found to be more efficient.

It is not to imply that soap plays no part in hand eczemas, but that the observations indicate a need for caution in arriving at general conclusions. The test of usage (the chief evidence upon which we can rely) is not easily arranged under properly controlled conditions. It is un-

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*Complete Bibliography on Request

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ost ins tances and have thus
ven ris to the grave suspicion
at the diagnosis of industrial
oap) dermatitis was wrong in the first place.

The use of soap-based barrier creams, so far from preventing industrial dermatitis, may substantially increase the risk. The substitution of ethanolamine soaps may reduce alkalinity, but their effect in potentiating other industrial irritants remains problematic. Until more evidence is available it would certainly seem best to avoid any type of soap in a barrier cream.◀

Brit. M.J., 1:1676-1679,1960.

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emorrhagic Disease of ewborn: Treatment with itamin K

After reports of increased kernicterus and hemolytic anemia llowing use of vitamin K in eonates, its use prophylactically in such infants was discontinued. Following this the incidence of massive neonatal hemorrhage and postcircumcision leeding became considerably igher than before discontinuance. To determine if vitamin K ould significantly influence the cidence of bleeding, a synthetic rm of vitamin K, 5 mg., was ven to 240 male infants born n even-numbered days during a eriod of 3 months. An additional 230 male infants, born on odd-umbered days, served as controls. The incidence of secondary bleeding following circumcision was 2.5% in the vitamin K group and 3.9% in the controls. In a smaller study only 1 of 22 infants receiving vitamin K showed moderate prolongation of Quick prothrombin time, while 10 of 24 not receiving the vitamin had moderate to marked prolongation.

Most infants reported as developing kernicterus were given doses of 20 to 80 mg. of vitamin K over several days. A dose of 1 to 2 mg. is sufficient to correct low prothrombin and proconvertin levels, and should be given prophylactically in this dosage range.

Vietti, T. J., et al., *J. Pediat.*, 56:343-346,1960.

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Doctors and Disaster

ROBERT W. HOPKINS, M.D.,* *Cleveland, Ohio*

Physicians must be prepared for community disasters by active participation in programs organized for this purpose. They must be familiar with emergency lifesaving procedures in situations involving mass casualties and restricted facilities. Lay personnel should be included in the training program.

Serious injury will be encountered from time to time by almost all physicians. A catastrophic occurrence may cause injury in many different ways to thousands or hundreds of thousands. Industrial, household, or automobile accidents ordinarily injure only a few persons. Large numbers, sometimes reaching into the hundreds, may fall prey to hurricanes or tornadoes or to accidents involving public transportation. With modern instruments of destruction, whole communities may become victims of missile-borne bombs.

Because serious injury is not an every-day occcurrence in the practice of most physicians, a certain complacency concerning its management exists. Natural disasters tend to be ignored unless the tornado has struck one's own community. When the possibility of a nuclear attack is mentioned and the potential numbers of casualties are considered, it is often assumed that nothing could be done and that attempts to cope with such a situation would be futile. Disaster, man-made or natural, may strike any community, and lives will be lost that could have been saved had the community and especially its physicians been prepared. In a nuclear explosion, thousands of lives may be sacrificed if the problem is ignored.

The physician must direct his effort to two main areas. First, he must participate actively in organized attempts in his community to cope with disaster. Medical participation in civilian defense affairs is particularly important in planning for care of large numbers of casualties in

*From the Department of Surgery, Cleveland Metropolitan Hospital (formerly City Hospital), and Western Reserve University School of Medicine.

hospitals and communities and in training units organized for this purpose. These units are most effective in relatively localized disasters. It has been repeatedly demonstrated that planning, organization, and practice avert much of the confusion and disorder attendant on any disaster. In a nuclear disaster, while organized units may not be able to function efficiently, the widespread instruction of lay personnel in methods of resuscitation may save thousands of lives.

The second matter for consideration is knowledge of procedures necessary to save the individual injured patient's life. Such knowledge must be second nature to the physician, and he must have readily available at least minimum equipment for instituting such measures. In this matter it makes little difference whether there is one casualty or many.

The importance of the physician in general practice has been stressed. Treatment of the injured has been and will remain in the hands of the general practitioner. The general surgeon steadily has become less and less general, and the surgical specialist more and more specialized. There can be no specialist or specialty for the surgery of trauma, for the results of injury flout, with consummate scorn, the man-made bounda of all divisions of surgery. M important of all is that the qu ity of care rendered to the i jured of the future depends upon the medical students residents of today, but upon th teachers.[1]

An Outline of Procedure

In the treatment of the se ously injured patient, attenti must be directed first to th areas where injury immediat threatens life. A priority of m agement must be establish This priority should include:

1. Arrest of brisk exter hemorrhage.
2. Maintenance or restorati of respiration.
3. Measures to prevent or co bat shock.
4. Thorough examination the patient.
5. Surgery as part of resusci tion if necessary.

External Hemorrhage

In most instances any brisk e ternal bleeding is most effecti ly and safely controlled by dir external pressure. A tourniq may be required on occasion, b this imposes additional hazar and should be avoided if pos ble. An improperly applied tor quet may actually increase l of blood by obstructing only v

1. McLaughlin, H. L., *Bull. Am. Coll. Su* 43:41,1958.



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nous return. When an arterial tourniquet is released, massive amounts of blood and plasma may be lost into the extremity. Once applied, therefore, the tourniquet should not be released until measures for combatting shock are immediately available. In some instances direct control of hemorrhage by use of hemostatic forceps may be possible, but care must be taken to avoid injury to important nearby structures.

Respiration

Frequently the most urgent problem confronting the physician attending a seriously injured patient is establishment and maintenance of adequate respiration. Procedures which may be required include establishment of an airway, assistance to respiration, control of pneumothorax, and relief of pain.

Establishment of Airway

Obstruction to the patient's upper respiratory tract may require immediate correction. In unconscious patients the tongue may fall back to occlude the pharynx. This may be relieved by drawing the tongue or mandible forward, placing the patient on his side, or inserting an oral or nasopharyngeal airway.

Accumulation of secretions in the treachea or pharynx may result in significant impairme of respiratory exchange. This particularly true in patients w injury to the brain, chest, a oro- or nasopharynx. Meticulo care must be taken to aspira these secretions or, if suction a paratus is not available, to wi secretions from the pharynx wi a finger and cloth. Tracheos my may be required if accumu tion of secretions is especial severe.

Edema and hemorrhage as ciated with wounds of the he and neck frequently lead to d struction of upper respirato passages. Partial obstruction m progress very rapidly to co plete obstruction in a wound this sort, and tracheostomy m be done before this can occ In emergency, the use of one two 12-gauge needles inserted to the trachea may be adequa to sustain life until a prop tracheostomy can be acco plished.

Assistance to Respiration

Assistance to respiration is fr quently a life-saving measu The patient may become hypo because he is unable to excha adequate amounts of air. Resp atory paralysis may be asso ated with injury to the brain spinal cord. Excessive use of na cotics may severely reduce t patient's tidal volume. Parado

l moti n of the chest wall following a crushing injury to the orax will also markedly limit spirato y exchange.

Positi e-pressure oxygen adinister d through a tightly fitg ma k with an airway in ace is t e most effective means assist g respirations. In the sence of special equipment, outh-to-mouth insufflation — th the mandible held forward, e neck extended and the nares osed — will provide satisfacry ventilation. This may be imoved by use of a double-ended far airway.

Control of Pneumothorax

Respiratory distress may relt from the presence of a pneuothorax, either open or closed. n open pneumothorax, or suckg wound, will allow collapse of e ipsilateral lung and also inrfere with ventilation on the pposite side. It must be closed omptly by means of an occlue vaseline gauze-dressing, and e pneumothorax must be asrated.

Laceration of the lung with an tact chest wall will permit an creasing accumulation of air thin the pleural cavity with llapse of the lung. Considerle tension within the pleural vity with shift of the mediasnum to the opposite side may sult from the valve-like action of the lacerated lung. Such a tension pneumothorax must be aspirated with provision for the release of any further accumulation of air. An anterior intercostal catheter attached to water-seal drainage is most effective. In emergency, intravenous tubing attached to a large-bore needle in an intercostal space with the other end beneath a fluid level on the floor will serve temporarily. A moistened finger cot with a small slit in the tip may be tied to a needle inserted into an intercostal space. This will serve as a flutter valve to relieve tension within the pleural cavity.

Relief of Pain

Pain secondary to fractured ribs may cause considerable inhibition of respiration. Breathing may be improved if intercostal procaine blocks are used to relieve this pain. Narcotics should be used with restraint in patients with respiratory embarrassment because of their depressant effect.

Shock

Management of shock in the seriously injured patient consists of measures to correct factors which have caused the state of shock. In the vast majority of patients hypotension is due to blood loss, although other causes must be considered.

Blood Loss

While loss of blood as a cause for shock is frequently obvious, it is not always so. A superficial wound which is not bleeding when seen by the physician may have bled massively before the patient appeared. Hemorrhage into the pleural or peritoneal cavity may be significant before it is evident on physical examination. Injuries to the extremities, especially fracture of the femur, may be associated with massive blood loss into soft tissues.

Whenever possible, such blood loss should be compensated by immediate replacement with whole blood. If blood is not available, substitutes such as dextran, plasma, or saline may be used in limited quantities until whole blood is obtained. The source of bleeding must be controlled. With serious intraperitoneal or intrapleural bleeding, surgical intervention *as part of resuscitation* may be required to save the patient's life.

The Use of Vasopressor Substances

This practice in an attempt to restore blood pressure in injured patients appears to be widespread. Although restoration of normal pressure in the major arteries can frequently be achieved by the use of these drugs, it has not been demonstrated that this is beneficial to the patient. U toward effects of sympathom metic drugs, such as cardi arrhythmias, may occur. C striction of arterioles at the pr capillary level may actually r duce the effective capillary ci culation, and it is here whe blood is required. Simeone[2] h effectively pointed this out in recent editorial: "The empi use of potent sympathomime agents to raise the blood pr sure can jeopardize the patien chances for recovery. Not o do these substances sometim have fatal untoward effects, b by permitting the physician rest in the security of a norm arterial blood pressure, obtain at the expense of the capilla circulation beyond, they can co tribute to a fatal outcome."

Cardiac Tamponade

Among conditions causing h potension refractory to transf sion, cardiac tamponade must kept in mind. It may occur w apparently insignificant woun of the chest, upper abdomen, back. It causes a low arter pressure, an elevated veno pressure, increase in area of c diac dullness with diminish heart sounds, and a paradoxi pulse. Prompt relief of tamp nade by pericardiocentesis or, facilities are available, imme

2. Simeone, F. A., *Surg. Gynec. & Obst.*, 740-742,1959.

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ight for children.

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doses before breakfast, at 3 P.M.,
d before retiring; after two days,
cc. doses. Children, 1st 6 doses
cc.–then 0.2 cc. (per lb. of body
ight) as above.

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2. Bradwell, E. K.: Acta med. scand. 146:123, 1953.
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REFER TO PDR
PAGE 812

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Detroit 11, Michigan

ate thoracotomy has frequently been life saving. When treatment is administered without delay, the salvage rate for wounds of the heart is quite high.

Pain

Severe pain may add materially to shock in the patient who has been seriously injured. Gentle handling of the patient and immobilization of the injured part are the most important measures to minimize pain. Local procaine infiltration may sometimes be indicated. Narcotics are to be administered only with extreme care to avoid serious depressant effects. If urgently necessary, morphine should be administered *intravenously;* in the condition of shock, narcotics administered subcutaneously will be poorly absorbed and so provide no relief of pain initially. Severe depression may later result from rapid absorption when circulation is restored.

Infection

Although appearing somewhat later than shock from preceding causes, vasomotor paralysis and hypotension may be associated with infection secondary to trauma. Intraperitoneal or retroperitoneal rupture of intestine or bladder is prone to cause extensive sepsis following abdominal injury. Necrotic tissue remaining in a contused con[illegible]amina[illegible] wound may lead to s[illegible]rious [illegible] fection anaerobic wit[illegible] org[illegible] isms. Of importance in the m[illegible] agement of sepsis follo[illegible]ing tr[illegible] ma is the recognition [illegible]nd sur[illegible] cal elimination of the source [illegible] infection.

Close Examination of the Pati[illegible]

When the immediate thre[illegible] to life in the acutely injured p[illegible] tient have been met, time m[illegible] be taken for a more detail[illegible] examination. In addition [illegible] examination of the chest, ab[illegible] men, central nervous syst[illegible] and area of obvious injury, p[illegible] ticular attention should be gi[illegible] to certain details which are [illegible] quently overlooked:

1. The surface of the b[illegible] must be meticulously inspec[illegible] for penetrating wounds, wh[illegible] may lead to extensive anaer[illegible] infections. Wounds of the ba[illegible] buttocks, or proximal extre[illegible] ties may be associated with [illegible] ceral injury in the chest or [illegible] domen.

2. The extremities must [illegible] carefully examined for sensati[illegible] motor power, and pulses, in [illegible] der to detect injury to m[illegible] nerves or arteries.

3. Rectal examination must [illegible] performed on all patients w[illegible] serious injury. Local injury [illegible] the rectum may be found, or [illegible] presence of blood on the ex[illegible]

ing fin er may indicate a visceral la eration which can be ywher along the gastrointesnal tra t. Failure to feel the rostate gland will suggest verano of the membranous ethra.

4. Uri alysis demonstrating ross or microscopic hematuria ill indi ate injury to the genurinar tract. When there is uch gr ss blood in the urine, ere is usually a large laceraon of the kidney, ureter, bladr, or u ethra. Microscopic heaturia suggests a contusion of dney or bladder, although serus injury may exist. Patients ith fractures of the pelvis must assumed to have bladder or ethral damage until it has en demonstrated otherwise.

5. X-ray examination will ove helpful in equivocal cases. he presence of a laceration of omach or intestine may be conrmed by an upright film of the aphragm showing the presce of free air. Indentation of e wall of the stomach, depresn of the splenic flexure of the lon, or increased density of the ft upper quadrant will suggest pture of the spleen. Retroperneal laceration of the duodenn or colon may be indicated bubbles of gas seen in the retperitoneal tissues. Emergency stography or intravenous uroaphy may be indicated when injury to the urinary tract is suspected. Films of the chest will demonstrate significant hemopneumothorax which may not be apparent on physical examination. Widening of the mediastinum may indicate injury to the esophagus or to the great vessels.

Occult Injury

Of particular importance is careful observation of the patient whose trauma initially seems insignificant; he may have a potentially fatal injury. Intraabdominal or intrapleural bleeding may not be evident when the patient is first seen, but steadily continuing bleeding from a small laceration in the spleen or from an intercostal artery may result in death. Attention may be focused on an obvious injury to the extent that serious occult injury with late manifestations is overlooked. Too often the patient is sent home, only to suffer avoidable complication or catastrophe later.

Recently a young patient was seen in the accident room of the Metropolitan General Hospital following a fall from his bicycle. The only apparent injury was an abrasion of the knee and a contusion of the abdominal wall. When the patient was brought back to the hospital 24 hours later, infection secondary to a retroperitoneal rupture of the

duodenum was already established, and his course was prolonged and complicated. The patient and his family may be told to return in the event of untoward symptoms, but they cannot be expected to use proper judgment in the matter.

Responsibility for recognition of occult injury must be assumed by the generalist or general surgeon responsible for the initial care of the patient, working in cooperation with any specialists caring for the patient.

Summary

Active participation of all physicians in community disaster-relief programs is essential if unnecessary loss of life in a disaster is to be prevented.

Widespread training of lay and professional personnel in methods of resuscitation should be accomplished.

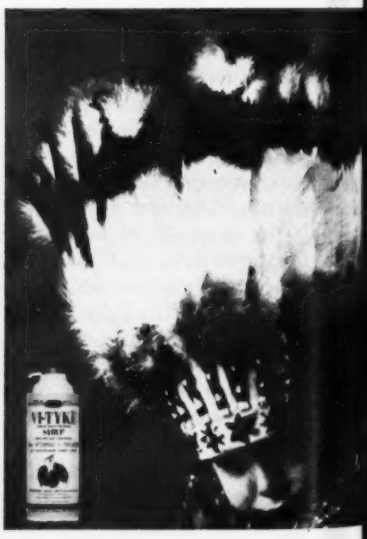
Early management of the seriously injured patient has been discussed. Of particular importance are: arrest of brisk external hemorrhage, maintenance or restoration of adequate respiration, prevention or treatment of shock, a thorough but expeditious examination of the patient and surgical intervention as promptly of resuscitation if necessary.

A high index of suspicion and close observation of the patient are required to detect deceptive occult injury.◀

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ffect of Hydrochlorothiazide in Exogenous besity

HARVEY P. EINHORN, M.D., F.A.C.N.,* *Newark, New Jersey,*
and S. WILLIAM KALB, M.D., F.A.C.G.,† *Newark, New Jersey*

When weight reduction in response to other anti-obesity measures had ceased, hydrochlorothiazide therapy resulted in a further clinically significant reduction of weight in 92 per cent of a group of 190 patients. Side effects were more frequent in those receiving 50 mg. daily than 25 mg. daily.

Not all therapeutic problems encountered in the management of exogenous obesity are solved by the use of thyroid extract, diet, tranquilizers, and anorectic agents. The proper management of this disorder requires close observation of the patient's mobile and appropriate interjection of the physician's personality and talents at crucial periods of therapy.[1]

Weight loss does not proceed in a continuous, gradual manner, despite of the most rigid dietary control and vigorous therapy with a variety of anti-obesity regimens. In a majority of patients under treatment for exogenous obesity, periods of weight loss are separated by periods of weight plateaus which can persist for weeks and months, during which many patients become discouraged and throw over their program by dietary excesses.

Counseling obese patients prior to and during such periods has value in preventing abandonment of the program. But in many cases advice and counsel are not adequate to counter the stress placed on the obese patient by spouse, employer, or himself.

An increase in blood volume in patients with exogenous obesity, corresponding to 10 per cent of the increased (obesity) mass has been demonstrated.[2,3]

int Barnabas Hospital Medical Staff, New-
k, New Jersey.
hief of Nutrition Service, Clara Maass Me-
orial Hospital, Belleville, New Jersey.

1. Sebrell, W. H., Jr., *Metabolism*, 6:411,1957.
2. Huff, R. L., & Feller, D. D., *J. Clin. Invest.*, 35:1,1956.
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TABLE 1

WEIGHT REDUCTION IN 70 PATIENTS RECEIVING 25 MG. HYDROCHLOROTHIAZIDE DAILY

		AVERAGE WEIGHT LOSS
First week:	67 patients (88%) lost 309½ pounds	4.6 lb.
Second week:	42 patients (55%) lost 91¼ pounds	2.2 lb.
Third week:	52 patients (68%) lost 155¾ pounds	2.9 lb.
Fourth week:	48 patients (63%) lost 144 pounds	3.0 lb.
TOTAL:	70 patients (92%) lost 522¾ pounds during 4-week study	7.5 lb.

Note: Three patients (4%) of 76 patients experienced side effects.

This increase in fluid could account, in part, for the hypertension[4-7] and cardiac hypertrophy[8] so frequently present in the obese. Since a diuretic and natriuretic agent is a logical choice to correct this aspect of the condition, the effect of hydrochlorothiazide* was evaluated in 190 obese patients.

Methods and Materials

All patients were under treatment with reducing diets, in addition to thyroid extract and/or an anorectic agent. The weight of each had been on a plateau for at least six weeks. During the period of treatment hydrochlorothiazide was administered in doses of 25 or 50 mg. daily. Background therapy, which includ diet, thyroid and/or an anorec agent, was not altered at a time during the study. Obser tions made at weekly interv over a four-week period includ measurements of weight, blo pressure, and pulse. Patie were interviewed to elicit a information as to side effects a to evaluate their morale.

Results

EFFECT ON WEIGHT. In 1 (91 per cent) of the patie studied, a clinically signific weight loss resulted during t four-week study, average l per patient being 7.2 pounds. clinically significant differen could be seen between t weight loss on the 25 mg. da dosage (Table 1) and that on t 50 mg. daily dosage (Table 2 The incidence of side effects w

*Esidrix®, Ciba Pharmaceutical Products, Inc., Summit, N.J.

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TABLE 2

WEIGHT REDUCTION IN 104 PATIENTS RECEIVING 50 MG. HYDROCHLOROTHIAZIDE DAILY

		AVERAGE WEIGHT LOSS
First week:	96 patients (84%) lost 452¼ pounds	4.7 lb.
Second week:	62 patients (54%) lost 168½ pounds	2.5 lb.
Third week:	70 patients (61%) lost 198½ pounds	2.8 lb.
Fourth week:	67 patients (59%) lost 207 pounds	3.0 lb.
TOTAL:	104 patients (91%) lost 727½ pounds during 4-week study	6.9 lb.

Note: Six patients (5%) of 114 patients experienced side effects.

lower in the group receiving the lower dosage.

Weight loss was greatest in the first and fourth weeks of therapy, although clinically significant losses also occurred during the second and third weeks.

The accompanying tables indicate the responses for the group according to dosage and length of treatment.

EFFECT ON MORALE. The most dramatic effect observed was the renewed interest and cooperation which all patients exhibited. All had been stationary in weight for six weeks and had grown somewhat depressed over their lack of further response to the regimen, in spite of counseling. The prompt and continued weight-loss response seen after hydrochlorothiazide renewed approval of the regimen and greatly facilitated maintaining patient cooperation.

EFFECT ON BLOOD PRESS
Although blood pressure for
entire group averaged lowe
the end of the program tha
the beginning, there was
one instance of a significant
crease of pressure in a nor
tensive patient. The remainde
the patients who were nor
tensive remained in this ra
The case of the normoten
patient who presumably exp
enced a pronounced fall in p
sure is discussed under "S
Effects."

Side Effects

Side effects were seen in
of the 190 patients, for an o
all incidence of 4.5 per c
Most prominent among them
weakness, which occurred p
ticularly in patients treated d
ing the summer months with
larger doses. Other side effe
included dryness of mouth, he



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ache, and increased sweating. A single instance of dizziness and syncope, presumably due to hypotension, developed in a normotensive woman receiving 50 mg. hydrochlorothiazide daily during a particularly warm, humid period. She had no further difficulty of this sort when the dosage was reduced to 25 mg. daily. In all cases side effects were easily controlled by reducing dosage.

Discussion

Exogenous obesity is frequently associated with a significant increase in blood volume. In addition to the use of diet, thyroid extract and anorectic agents, the use of a potent, orally effective diuretic, hydrochlorothiazide, achieves a further reduction of weight by the removal of excess fluid and salt. This therapy is of particular value during periods of weight plateauing, a phenomenon frequently encountered in any therapeutic program aimed at reducing weight. By reinstituting a gradual reduction of weight, the patient is encouraged to persist in the use of diet and other medication. Without full patient cooperation, no real measure of success can be achieved in treating obesity.

When therapy with hydrochlorothiazide is discontinued, it should be done slowly, with gradual decreases in total daily dosage, in order to avoid the acute retention of sodium and fluid which may occur when medication is abruptly discontinued.

Conclusions

1. Hydrochlorothiazide is a potent, orally effective diuretic agent, which is effective in reducing the excessive amounts of extracellular fluid and salt found in exogenous obesity. The use of hydrochlorothiazide resulted in a further clinically significant reduction of weight in 92 per cent of a group of 19 patients who were no longer losing weight in response to various accepted anti-obesity therapies.

2. The re-establishment of weight reduction by hydrochlorothiazide was prompt in onset and persisted over the period of study in dosages of 25 mg. daily and 50 mg. daily. Since the lower dosage (25 mg. daily) is equally effective and produces fewer side effects, this is the recommended dosage, at least in the beginning of therapy.

3. Patients who lost additional weight had a better morale and were more cooperative with the doctor than those who were not treated with, or did not respond to, hydrochlorothiazide.

4. Side effects, consisting of nausea, weakness, headache, and dry mouth, were encountered in

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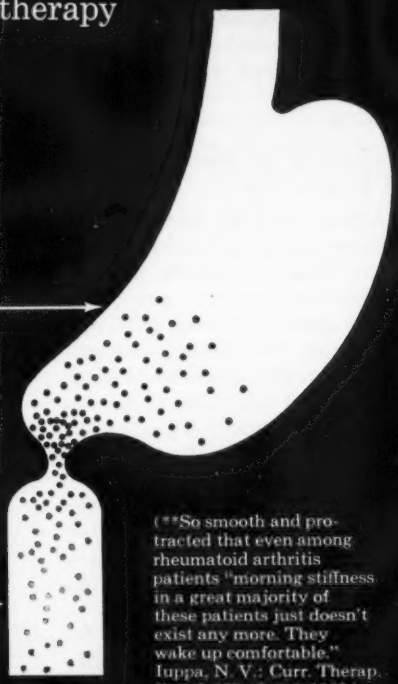
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*Trademark, Reg. U. S. Pat. Off — methylprednisolone, Upjohn

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Medrol hits the disease, but spares the patient

4.5 per cent of the cases, but were more frequent and severe in patients receiving the larger dosage. Side effects in all cases responded adequately to reduction in dosage.

5. Significant blood pressure reduction did not occur in patients who were not hypertensive at the onset of the study, with one exception. A syncopal attack occurred in one normotensive woman who was receiving 50 mg. hydrochlorothiazide daily during an extremely hot, humid period; however, this did not recur on reduced dosage.

6. Hydrochlorothiazide is a valuable therapeutic agent in the treatment of exogenous obesity, particularly at times when weight reduction in response to other anti-obesity measures has ceased.◀

Perforation of Rectum by Enema Tip

A man, aged 63, was admitted with far advanced multiple sclerosis. While an orderly was administering a sodium phosphate enema from a disposable plastic container, the patient experienced a sudden pain in the anus. Four hours later, pain was severe, the scrotum and penis were swollen, the patient unable to urinate, the temperature 101°. Eight hours after the enema the patient had several involuntary bowel movements and experienced nausea and moderate lower abdominal discomfort.

A retention catheter was inserted into the urinary bladder and a surgical consultant requested. Examination revealed pulse 120, temperature 101°, and white blood count 13,000. The abdomen was soft, bowel sounds present, and the penis, scrotum, and perineum were edematous. The rectum was perforated in the anterior wall, 4 cm. from the anus.

Treatment consisted of intravenous fluids and large doses of penicillin and streptomycin; later treatment of regular diet, mineral oil, and sitz baths. After one week symptoms had subsided. Proctoscopic examination confirmed the perforation and an anterior abscess cavity. The size of the cavity, drainage, and the anal incontinence subsided gradually. Two months after the injury, the patient again experienced the urge to defecate and he had one or 2 stools daily or every other day. The abscess cavity was almost healed and the patient was discharged.

Scott, J., *Illinois M.J.*, 117:240,1960.

Clinical Appraisal of an Antibiotic Lotion and Powder

ERVIN EPSTEIN, M.D., *Oakland, California*

►*An odorless lotion containing polymixin B sulfate and neomycin sulfate gained favorable patient acceptance among 25 patients having acne vulgaris and 24 having other pyodermas. A powder form brought good response among 10 cases of electrocautery postoperative wounds. In none were side reactions noted.*◄

This is a report of a clinical test of a lotion containing 10,000 units of polymyxin B sulfate and 5 mg. of neomycin sulfate in each cc. of a water-miscible lotion base* in 64 patients, and a powder containing polymyxin B sulfate 5,000 units, neomycin sulfate 5 mg., and zinc bacitracin 400 units in a water-soluble powder base† in 23 cases. Control studies were not performed so the findings herein reported are those of a clinical observer.

The Lotion

Being odorless and not messy, there was ready patient acceptance. This was true particularly in acne vulgaris where the patients had become accustomed to drying, visible, malodorous preparations. There was no evidence of irritation or hypersensitivity in any of these patients. The lotion was rubbed into the affected area. The frequency of application varied from twice to six times per day. Bandages were avoided.

Twenty-five patients with acne (19 females and 6 males) were treated with this preparation. Eighteen of the patients were between 11 and 25 years of age, one being younger and 6 older. The eruption was on the face in 23, while the chest was involved in 6 cases and the back in 7. In 15 instances the eruption had been present for more than 4 years; in 7 it was of more than 11 years standing. The results can be classified as follows: negative in 4, 1-plus in

*Neosporin *Lotion*®, Burroughs Wellcome & Co., Inc., Tuckahoe, N.Y.
†Neosporin *Powder*®, Burroughs Wellcome & Co., Inc., Tuckahoe, N.Y.

3, 2-plus in 7, 3-plus in 6, 4-plus (complete clearing) in 3. In 2 cases the patients did not return for further observation. Good results (3-plus or 4-plus) were obtained in 9 instances (36%). The lack of odor and drying makes the preparation acceptable to the patient. It can be employed in conjunction with x-radiation.

A group of 24 patients with undoubted pyogenic infections of the skin were treated with the lotion. Of 6 patients with furunculosis, 5 obtained good results while one failed to return. In ecthyma the results were outstanding in 4, passable in 1 and poor in 2. Of 7 patients with folliculitis, 5 obtained marked benefit, while 2 failed to respond satisfactorily. All four patients with impetigo did well on the lotion. The over-all results in this group were good in 18 (75%), fair in one, poor in 4, and one patient did not return for further care.

Of two patients who had kerions, one did poorly and the other failed to return. One patient with rosacea discontinued treatment without orders; one with a recalcitrant pustular eruption of the extremities did well, one failed to continue treatment. Bromidrosis subsided temporarily in one instance. Of the six patients with chronic paronychia treated, four responded well, while the other two had some improvement. One patient with perleche and another with herpes simplex cleared quickly with the application of the lotion. The substance was used postoperatively after the electro-surgical removal of a wart in one case. Erythema, swelling and tenderness which had developed in the wound was reduced by this agent. In this group, the best results were achieved in chronic paronychias.

The Powder

The powder was applied locally in post-operative wounds produced by electrosurgical means in 10 instances. Very fine results were obtained in eight slow-healing or infected wounds while in two there was very little benefit. The outstanding result occurred in a woman of 78 who had a squamous-cell epithelioma removed by cautery from the lower leg. After 5½ months there was little evidence of healing despite the use of supportive bandages and various local applications. Almost immediate wound improvement was shown on use of the powder, complete healing in one month. It is likely that this is a prime indication for this powder. Other types of ulcers were not treated as none were encountered during the

eriod when this agent was being tested.

Eight patients with dermatitis in a fold of the skin were treated, satisfactory results obtained in five. In one other there was some improvement, in one there was no improvement and in one the dermatitis became more active.

Good results were obtained in one patient each with paresthesias of the feet (burning) and in one with hyperhidrosis. Unsatisfactory response was noted in two cases of recalcitrant pustular eruption of the extremities and in one of furunculosis.

Comment

The results obtained with these preparations are promising but certainly are not to be considered as a blanket recommendation for their use in the conditions studied. The lotion probably will find its greatest application in acne vulgaris while the powder seems most effective as a dressing for electrosurgical wounds. Realization of the potential benefits and limitations of these antibiotic products will aid in establishing their rightful position in the therapeutic armamentarium of those who treat skin diseases.◀

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Use of a Non-Narcotic Antitussive in Daily Practice

EDWIN MATLIN, M.D., *Mount Holly Springs, Pennsylvania*

While codeine offers many advantages as a cough suppressor, it sometimes produces side effects worse than the original condition. A new therapeutic agent which duplicates and improves upon the action of codeine was given to 100 patients. In 92 the response was good to excellent, especially among chronic cases.

Codeine preparations of one kind or another are the most widely used therapeutic agents for cough control. All narcotic preparations tend to addiction, to depression of the respiratory center, and at times to impairment of ventilation. Other undesirable side effects include sedation, cardiac depression, constipation, vertigo, visual and auditory disturbances, drug sensitivity, and gastrointestinal upset.

A Trial of a New and Promising Cough Remedy

This is a report of a study of benzonatate*, an entirely new type of non-narcotic antitussive, which many have reported to be as effective as codeine, and without its drawbacks. Unlike codeine or similar cough preparations, benzonatate attacks cough centrally as well as peripherally, i.e., at the cough center and at the lung stretch receptors. It was recently noted there is suggestive evidence that the antitussive effect occurs by action at the pulmonary parenchymal proprioceptor centers.[1] Other investigators have commented that the drug has a selective anesthetizing action on the stretch receptors of the lung, thus possessing a high degree of tolerability without the disagreeable central side effects of narcotics or the autonomic effects on circulation produced by local anesthetics.[2-4] It has also been observed that benzonatate consistently increased the minute ventilation volume, and at the

*Tessalon®, Ciba Pharmaceutical Products, Inc., Summit, N. J.

1. Segal, M. S., *J.A.M.A.*, 169:1063,1959.
2. Bucher, K., *Schweiz. med. Wchnschr.*, 86: 94,1956.
3. Herzog, H., *Schweiz. med. Wchnschr.*, 86: 96,1956.
4. Simon, S. W., *Ann. Allergy*, 15:521,1957.



she calls it "nervous indigestion"

diagnosis: a wrought-up patient with a functional gastrointestinal disorder compounded by inadequate digestion. **treatment:** reassurance first, then medication to relieve the gastric symptoms, calm the emotions, and enhance the digestive process. **prescription:** new Donnazyme—providing the multiple actions of widely accepted Donnatal® and Entozyme®—two tablets t.i.d., or as necessary.

Each Donnazyme tablet contains

—In the gastric-soluble outer layer: Hyoscyamine sulfate, 0.0518 mg.; Atropine sulfate, 0.0097 mg.; Hyoscine hydrobromide, 0.0033 mg.; Phenobarbital (⅛ gr.), 8.1 mg.; and Pepsin, N. F., 150 mg. **In the enteric-coated core:** Pancreatin, N. F., 300 mg., and Bile salts, 150 mg.

antispasmodic • sedative • digestant

DONNAZYME

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TABLE 1

RESULTS OF *TESSALON* THERAPY IN 100 CASES OF COUGH

INDICATIONS	NUMBER OF CASES	RESULTS		
		EXCELLENT	GOOD	NONE
Common Cold	64	25	28	11
Bronchitis — Acute	12	3	5	4
Bronchitis — Chronic	8	5	2	1
Pleurisy	2	0	2	0
Asthma — Acute	4	1	2	1
Asthma — Chronic	2	1	1	0
Emphysema	4	3	1	0
Whooping Cough	2	0	1	1
Tuberculosis	2	1	1	0

me time appeared to provide tients with a sensation of ease breathing.[5] In its chemical ructure benzonatate is related mewhat to pontocaine.

Method of Study

Because of the favorable accumulated clinical evidence and laboratory reports, a preliminary tudy of the preparation in 100 atients of all ages with acute nd chronic cough was made. No ttempt was made to select the inds of cough. Patients were aken as they came into the office. No attention was paid to he amount of sputum or the onsistency. While the suggested original daily dosage was 100 g. for adults and 50 mg. for hildren under 10 (none of these atients was under 4 years of age) after the first few trials, the dosage was increased to 200 mg. for adults and 100 mg. for children, with good effect. Increasing the dosage beyond this point proved of little or no advantage in this series of patients.

Summary and Conclusions

In this trial, benzonatate proved rapidly effective in producing a marked reduction in coughing and hacking. As can be seen, excellent to good results were achieved in 82% of all our patients, with only 18% demonstrating little or no response. Best results were achieved in the chronic cases.

There were no untoward reactions or side effects in the entire series of 100 patients. Two cases of gastric irritability were noted, but since the condition remained

[5] Michelson, A. L., & Schiller, I. W., *J. Allergy*, 28:514,1957.

on discontinuance of the drug, the cough, rather than the medication, appeared to account for the development.

Benzonatate proved an excellent non-narcotic cough preparation, with an effectiveness paralleling codeine preparations without their side effects. While this series of 100 patients is too small to make conclusive remarks, the number was large enough to form a basis for the definite opinion that benzonatate is effective in all types of cough, although much more effective against chronic cough, affording great relief to such distressed patients.

Its efficiency can be determined fairly readily after the first t doses of medication. Moreover, those conditions where it is effective, it has none of the disadvantages of the commonly used antussives of today, and could used as a replacement for the preparations to the great advantage of the patient. The safe convenience to the patient, a lack of side effects of the dr recommend it especially for lon term cough therapy in chro cases. Some of our patients co mented that they seemed breathe more freely and eas There was no indication that b zonatate in any way interfe with normal expectoration.◀



Ano-genital Pruritus: Diagnosis and Management

NORMAN TOBIAS, M.D., *St. Louis, Missouri*

Itching in the genital-anal area may be aggravated by moisture, friction, or local dermatologic manifestations. Corticosteroids, rather than antihistamines, are most beneficial. Overtreatment with antipruritics is to be avoided. The patient's psyche should be appraised as a factor in some cases.

The causes of ano-genital pruritus may be local or general, occasionally reflex from the adnexa, primary without apparent skin lesions or associated with visible dermatoses. In every case, the causes are complex and each case must be studied as suggested by the detailed history. Cases in females may have a different etiology from that of the male, those of the infant from that of the middle-aged or the aged. Pregnancy, climate, personal hygiene and systemic diseases may be predisposing.

Because of the moisture, friction and irritation of the area, a simple case of pruritus may become eczematized. Since many patients as well as physicians regard all skin conditions in the ano-genital region as ringworm, the use of improper local applications or self-medication usually results in an acute dermatitis which masks the original condition.

It is important to analyze the patient's symptoms. Pruritus is the uncontrollable desire to scratch or rub. Long continued scratching or rubbing results in thickening of the parts, with more or less excoriation. Irritation from local factors results in edema, weeping or secondary infection.

Pruritus may be limited to the anus, it may be ano-genital-perineal, or it may also involve the groins. In any case, the pruritus is more intense than if some other part of the body were affected because of the local hyperhidrosis, the alkaline content of the sweat and the lack of opportunity for its evaporation.

Anal Pruritus

Primary anal pruritus exhibits no skin lesions other than some thickening of the mucosa and a few excoriations. The following causes should be investigated: poor bowel hygiene, local hyperhidrosis from stress, cancerphobia, chronic constipation with hard stools, fixation following anal surgery, and acid stools or diarrhea.

Secondary anal pruritus may occur in pregnancy (venous congestion), or from ingestion of antibiotics with changes in the intestinal flora, irritation from suppositories, thread worms (in children), excessive cleansing of the anus with strong soaps or antiseptics, or it may be associated with the skin lesions of psoriasis, moniliasis, senile atrophy, *lichen sclerosis et atrophicus,* or leukoplakia. Any mechanical defect of the anal outlet following surgery may result in persistent pruritus. In highly sensitive individuals the pruritus tends to spread at intervals to surrounding areas.

Treatment

The psychosomatic cases are treated by discussion, mild tranquilizers, aspirin and phenobarbital capsule as an antipruritic, proper anal hygiene, witch hazel pads after defecation, and a cream containing a steroid. In some cases, Quotane ointment or 3 per cent benzocaine in Gelu may be useful. Overtre atme should be avoided; likewise, ray therapy. Injections of alcoh and local anesthetics are n warranted because of danger sloughs.

Scrotal Pruritus

This is more common in t summer months. It may be mil moderate or intense, dependi on the cause and the thresho of sensitivity. Ringworm of t scrotum is very rare and if a sociated with tinea cruris (joc strap itch) it is more than like caused by contact with irritati medication. Pediculosis pub must first be considered an close examination made of th hairy areas. If balanitis is pre ent, diabetes may be a facto The most common cause in m experience is psychosomatic psychoerotic stimuli, includi sexual maladjustment.

Treatment

The thin skin cannot tolera ointments, but creams contai ing 1-2 per cent phenol or per cent hydrocortone should b used. Calamine lotion, antihist minic and benzocaine ointmen are contraindicated.

Vulvar Pruritus

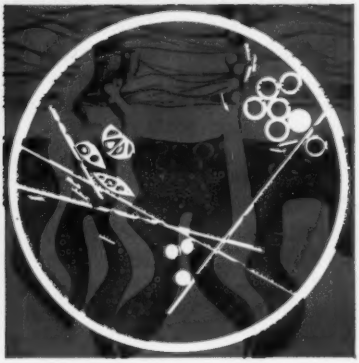
Itching of the vulva shoul never be taken lightly becaus if it becomes persistent, the pa tient may become highly neu rotic. Every effort should b

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1) Fox, H. H.: Antibiot. Med. & Clin. Therapy 6:85, 1959. (2) Lubowe, I. I.: Antibiot. Med. & Clin. Therapy 4:81, 1957. 3) Murphy, J. C.: Rocky Mountain M. J. 55:53 (June) 1958. (4) Pace, B. F.: Med. Rec. & Ann. 51:370, 1957.

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6-60

made to discover the cause by taking a detailed history and making a thorough cutaneous and gynecological examination and the necessary hematological and blood chemistry studies. A dermatological consultation is usually necessary especially if skin pathology is present. Trichomonas is often the cause in children and in women of the child-bearing age, while postmenopausal women may itch from senile changes or chronic neurodermatitis, anovesical prolapse and dribbling urine.

The localization of the pruritus may suggest the etiology in uncomplicated cases:

Hairy areas: pediculosis pubis, recent cutting of the hair, folliculitis (bacterial from poor hygiene or from ointments).

Perivulvar—seborrheic dermatitis, moniliasis.

Labiae, perineum and anal folds—neurodermatitis.

Mucosal areas—pelvic congestion, irritating douches, diabetes, trichomonas, cystocele, incontinence, pregnancy, chronic cervical discharge, gonorrhea.

Clitoris—neurodermatitis, extension from an intertrigo.

Periurethral—acid urine, diabetes, drugs, thread worms (children), cystitis.

Of the rarer causes of pruritus vulvae, those seen in older women are senile atrophy, *lichen sclerosis et atrophicus* and leuk plakia. Experienced de matol gists are best trained to tr these cases. Otherwise unnece sary surgery may be performe

Treatment

Local therapy consists of trial of steroid ointments, Dyclone ointment, or Quota lotion or creams containing 1 per cent phenol or 1/10 per ce menthol. Hot 1 per cent alum num acetate compresses are us ally soothing. In cases of inco tinence, silicone ointment m prevent the irritating urine fr coming in contact with the v var and contiguous areas. X-r therapy and surgery should avoided in *lichen sclerosis atrophicus*. Calcibronat (Sa doz) intravenous injections a pear to help many patients, though the effect of the "he wave" may be purely psych Antihistamines locally and mouth are ineffective. The ce trally acting tranquilizers a barbiturates are useful. The fi result depends on the rapp between the patient and the p sician. Cancerphobia often concealed in the patient's sens ium and must be combatted. T highly sensitive and embarrass woman often responds to t skillful attention of the physici who treats the local and regio pruritus as well as the enti personality.◀

Relief of Chronic Rectal Ache

WILLIAM T. SMITH, M.D.,* *Minneapolis, Minnesota*

►*Patients complaining of chronic aches vaguely described as rectal or pelvic but not traceable to any of the usual disorders should not be dismissed as neurotic. Their discomfort may be caused by spasm of the pelvic floor muscles and often may be relieved by simple massage, heat and correction of posture.*◄

Proctologists frequently see patients having a peculiar vague complaint that suggests some painful rectal or pelvic disorder but cannot be identified by routine anorectal and proctosigmoidoscopic examinations. Often these patients are reluctant to recite their symptoms once again, having a non-specific history and having consulted other specialists (e.g., orthopedic surgeon, urologist, gynecologist) without diagnosis or relief. The majority will be found to suffer from a spastic muscle syndrome best described as a painful spasm of one or more of the pelvic floor muscles. This syndrome is easily distinguished from simple coccydinia because the coccyx is usually not tender on palpation and symptoms are not localized there, whereas if the primary complaint is localized in the tailbone there is usually a history of trauma to the coccyx and the diagnosis of coccydinia is obvious.

Infection in adjacent pelvic viscera may occasionally be associated with this syndrome, such infection being thought to produce reflex spasm in the pelvic floor muscles. Other entities frequently considered include anal fissure, proctitis, prostatitis and salpingitis. It should be noted, however, that the patients relieved of symptoms by treatment of these entities rarely have the spastic sling muscles characteristic of this syndrome. Although many patients with this syndrome may be considered neurotic, their complaint being vague and bizarre and not accounted for by any specific etiologic factor, careful history and examination will reveal the

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source of their discomfort and subsequent treatment can give them much relief.

Recognition of This Syndrome

About 80 per cent of patients with this syndrome are women. It is seen in all age groups but is most common in the fourth decade. The pain is best described as a continuous ache vaguely localized in the rectum or the pelvis, sometimes agonizing in intensity. It is not particularly related to bowel movement, and commonly no coexisting anorectal disease is found. Accentuation of pain, described as a "catch" in the rectum, is often noted on arising from the sitting position. Symptoms are often intensified by prolonged riding in automobile or bus or sitting in a slumped position, recurrence or exacerbation commonly being precipitated by prolonged television viewing. Occasionally there is sudden onset of severe pain at night, awakening the patient and lasting up to an hour. Such an attack, usually described as proctalgia fugax, is actually nothing more than a variation of this levator spasm syndrome.

A careful history and differential diagnosis will suggest the difficulty. Too often these patients have already been subjected to various complicated examinations including pelvic x-rays and spinograms, and occasionally have been diagnosed and treated unsuccessfully for such diseases as prostatitis, sciatica, slipped disk. The patient commonly sits in a slumped position with the weight resting on one buttock, seldom sitting square on the chair since this usually accentuates the pain.

Digital Examination

The most common physical finding on careful digital examination is tenderness and spasm of one or more of the muscles (levator, coccygeus or piriformis) of the pelvic floor. Often the affected muscles feel enlarged, but may feel like ligamentous or fascial bands if atrophied from long continued spasm. When involvement is unilateral, as is common, a tender tense muscle is felt on the affected side, the opposite side feeling flat and relaxed (Figures 1 and 2). Careful digital sweeps (on both sides, anteriorly, medially and laterally) will pass the finger over the levator, coccygeus and piriformis muscles, locating any tenderness and eliciting pain which the patient will recognize as typical of her complaint.

Spasm in the piriformis, found in about 25 per cent of cases, may pinch the sciatic nerve as it emerges through the sacrosciatic foramen, producing pain down the leg as well as in the rectum. X-ray examination is not helpful



FIGURE 1



FIGURE 2

such cases, but occasionally, hen there is severe unilateral pasm, digital examination will eveal displacement of the coc- yx to the affected side (Figure). Before final diagnosis is ade, inflammatory disease in he adjacent viscera (e.g., pro- atitis, cervicitis, salpingitis, rethritis) must be ruled out, ut in the majority of cases these iscera are found to be healthy.

Treatment

Associated inflammatory dis- se in adjacent viscera must e treated medically or surgical- , but primary spastic muscle yndrome is best treated by sim- le massage. With the patient in he Sims position, the finger is nserted well into the rectum oward the involved side and the atient asked to bear down. earing down, by tensing the af- ected muscles, make subse- uent massage less painful. Mas- age is done by moving the fing- r at a steady pressure in an an- erior-posterior motion over the involved muscle (Figure 4). Usually about 5 minutes of massage is all that is needed for one treatment, half a dozen treatments over a period of two weeks usually giving much relief. The patient should be warned, if no etiologic factors have been found and corrected, that recurrence is not unusual and that additional treatments may be necessary from time to time to control symptoms.

Adjunctive treatment at home includes sitz baths, warm tap-water enemas, analgesics, and muscle relaxants such as methocarbamol (Robaxin). Correction of posture is usually helpful. The patient is directed not to slump but to sit, preferably in a chair with a firm seat, with the weight resting on the ischial tuberosity and the muscles of the posterior thigh. Repeated voluntary contraction and relaxation of the pelvic sling muscles and the gluteus maximus, valuable in improving tone and relieving spasm of these muscles, should be prac-



FIGURE 3



FIGURE 4

ticed frequently throughout the day. This exercise is particularly helpful for women with loose, sagging muscles.

Diathermy has given only minimal improvement in these cases, and coccygectomy is to be avoided (except for fracture, osteomyelitis, or deformed coccyx), cases having been reported in which symptoms have been exacerbated by removal of the coccyx and subsequently have been relieved by massage.

Summary

Patients complaining of chronic vague rectal or pelvic ache are often dismissed as neurotic, due to the practitioner's lack of understanding of this painful syndrome and to the absence of diagnostic proctologic, urologic, gynecologic, or orthopedic findings.

Diagnosis of primary spastic muscle syndrome in these cases can often be made from the history of the pain and a careful digital examination revealing the characteristic tenderness and spasticity of one or more of the levator, coccygeus, and piriformis muscles.

In most cases there is no associated disease of the pelvic viscera or other apparent cause for the muscular spasm.

Frequent gentle massage of the spastic muscles, supplemented with heat and correction of posture, often gives gratifying relief.◀



Evaluation of a Liquid Food Formula for Infants

WALTER J. SULKOWSKI, M.D.,* and
JOSEPH R. CHRISTIAN, M.D.,** *Chicago, Illinois*

Adequacy of a liquid formula to replace breast milk without supplementary vitamins or minerals was demonstrated in a 24-week study of 20 infants. There was no evidence of nutritional deficiency. Growth rates were normal, babies appeared to be satisfied, and mothers liked the ease of preparation.◀

The decline in the incidence of breast feeding has made it increasingly important to evaluate the nutritional efficacy and clinical performance of formulas used as substitutes for breast feeding. Such a study was undertaken with a group of newborn infants fed a liquid formula designed to resemble breast milk in fatty acid, amino acid, carbohydrate and mineral content (Table 1), and to supply vitamins in amounts comparing favorably with the recommended dietary allowances (revised 1958). Of particular interest is the calcium to phosphorus ratio of 1.5:1, which makes this formula more nearly approach human milk than other liquid formulas derived from cow's milk.

Plan of Study

A group of 20 infants was observed for periods varying up to 29 weeks, although statistics for this study were not summarized past the 24-week period. All infants were full term, with minimum gestation of 40 weeks, though one was classified as premature because of a birth weight of 5 lbs. 6 oz. Deliveries were normal except for one Cesarean section performed because of a previous section. Immediate neonatal period was uncomplicated and all infants were considered to be normal and healthy. They were born at the same hospital

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Liquid Breakfast, Pharmaceutical Division, The Borden Co., New York.

TABLE 1

COMPOSITION OF *LIQUID BREMIL* COMPARED TO BREAST MILK AND COW'S MILK[1,2]

	LIQUID BREMIL %	BREAST MILK %	COW'S MILK %
Water	87.5	87.5	87.5
Fat	3.5	3.5	3.5
Carbohydrate	7.0	7.5	4.7
Protein	1.5	1.25	3.4
Minerals	0.5	0.2	0.75
Calcium	0.078	0.034	0.122
Phosphorus	0.052	0.015	0.09
Ca:P ratio	1.5:1	2.2:1	1.3:1
Iron	0.0	0.001	0.00004

1. Jeans, P. C., & Marriott, W. M., Infant Nutrition, Fourth Edition, Mosby, St. Louis, 19
2. Food & Nutrition Board, National Research Council, Recommended Daily Dietary A lowances, revised 1958.

and all placed on the same formula within 36 hours of birth. There was no selection of cases; any mother who did not desire to breast feed and was willing to follow the prepared plan of feeding was enrolled in the study. A 1:1 dilution of the formula was the sole food for the first 8 weeks of life, at the end of which time cereal, fruits and vegetables were added. Only in one case was meat or egg yolk added to the diet prior to completion of 24 weeks. No additional vitamins were given in the course of the study.

The 20 infants included 9 colored girls and 6 colored and 5 white boys. The birth weights of boys ranged from 5 lbs. 6 oz. to 9 lbs. ½ oz., averaging 7 lbs. 2 oz. The birth weights of the girls ranged from 5 lbs. 15½ oz. to 9 lbs. 2 oz., averaging 7 lbs. 5 oz. These infants were exa ined at birth, at two weeks, four weeks, and then every f weeks until completion of t study. They were observed i a total of 527 infant weeks, w an average period of 26.35 wee Records were kept of the phy cal and neuromuscular devel ment, together with blood cou and roentgenograms of l bones to demonstrate evide of anemia, vitamin deficiency, retarded skeletal developme Additional tabulation was k of any intolerance of these i fants to the formula as evidenc by disturbed sleep or gast intestinal disorders.

Evaluation of Growth

The physical measureme charts of the Department

TABLE 2

GROWTH DURING FIRST SIX MONTHS AS SHOWN BY AVERAGE WEIGHT AND LENGTH

Age in Months	Average of 9 Girls			Average of 11 Boys		
	Weight		Length	Weight		Length
	pounds	*ounces*	*cm.*	*pounds*	*ounces*	*cm.*
Birth	7	5½	50.3	7	2	50.3
1	8	8	54.6	8	10	54.2
2	10	2	57.0	10	9½	57.9
3	11	8	59.1	12	5	59.4
4	13	1	61.3	13	13	62.3
5	14	1½	64.3	15	5	64.7
6	15	4	66.2	16	8	66.9

diatrics, State University of wa, were used, because of simicity and ease of readability,[1] standards of physical growth. he major disadvantage of these arts is that they were based data of white children from e higher socioeconomic groups, hereas the majority of the inents in this group were colored d in a lower economic group. hen average values for heights d weights (summarized in Tae 2) were plotted on Iowa owth charts 1 and 2, it was und that data for the infants the study group closely folwed the distribution curve of e Iowa growth charts but fell low the 50th percentile group. is lower level of physical owth is probably a reflection the preponderance of colored fants, who comprised 75 per cent of the total study group.

The muscular development of all infants was excellent. The only case of obesity was recorded at the age of 12 weeks and was corrected with closer adherence to the planned feeding schedule. In no instance did an infant fail to meet the standards of neuromuscular development of Watson and Lowrey.[2]

Examination of Bone and Hemoglobin

Roentgenograms of the long bones and ossification centers taken of 19 infants at the age of two weeks and again at 24 weeks of age showed advanced bone age for 4 infants and normal bone age for the other 15. None showed any evidence of vitamin deficiency, suggesting that the vitamin content of the formula

Jackson, R. L., & Kelly, H. G., *J. Pediat.*, 27:215,1945.

2. Watson, E. H., & Lowery, G. H., Growth and Development of Children, Year Book Publishers, Chicago, 1951.

is adequate for infant nutrition.

Blood for hemoglobin tests and red blood cell counts was obtained by heel puncture from 19 infants at the age of 2 weeks and again at 24 weeks. Hemoglobin determinations were made by the Leitz photoelectric method. No marked abnormalities were noted at 2 weeks of age, and the values at 24 weeks were within normal limits for this age group.[3] This is notable since the formula contains no iron and no supplemental iron was given during the study.

Acceptability of Formula

At the age of 4 weeks the 20 infants were taking an average of 24 ounces of formula a day. In the majority of cases the formula appeared to satisfy the infants and they slept well between feedings. In no case was it found necessary to discontinue the use of the formula due to the infant's refusal to accept it or due to poor tolerance as manifested by gastrointestinal disturbances. Regurgitation, other than the small amount coincident with "burping," was not encountered. No instance of "milk allergy" to the formula was observed in this series.

There were four cases of upper respiratory infection with which were associated loose stools. No antidiarrheal agents were used. There was no instance of diarrhea attributable to the formula. The number of bowel movements during the first 4 weeks of age varied between four and seven daily. At 24 weeks the average was one movement a day. Stools were generally well formed. At no time was it necessary to use suppositories or stool softeners. There were no cases of excoriated buttocks.

Summary

Twenty newborn infants were placed on a new liquid formula within 36 hours after birth and observed for a period of 24 weeks in an attempt to determine the nutritional adequacy of the formula in supporting growth and development without the use of supplementary vitamins and minerals.

The infants fed the formula were found to show normal growth and development throughout the early months of life with no physical, laboratory or roentgenographic evidence of nutritional deficiency.

The formula was well tolerated by all infants and in no instance was it necessary to discontinue the formula.

The formula was accepted by the mothers because of the simple and rapid method of preparation and the absence of feeding problems in the infants.◀

3. Nelson, W. E., Textbook of Pediatrics, Sixth Edition, Saunders, Philadelphia, 1954.

Sulfadimethoxine: Photosensitivity Studies

MILTON M. CAHN, M.D.,* and
EDWIN J. LEVY, M.D.,* *Philadelphia, Pennsylvania*

One of the side reactions to sulfonamides has been photosensitivity, although this has been reduced in the more recently-developed drugs of the group. No photosensitivity was noted among 100 healthy, white males and 47 pustular acne vulgaris patients receiving sulfadimethoxine when exposed to ultraviolet radiation.

Since their introduction as chemotherapeutic agents, the sulfonamides have been considered to be photosensitizing drugs. However, the incidence of photosensitivity reactions has been greatly reduced with the development of the newer antibacterial sulfonamides and the resultant diminished use of the older compounds, although photosensitivity following the administration of sulfamethoxypyridazine was recently reported.[1] This investigation was undertaken to determine the photosensitizing capacity of sulfadimethoxine†, a long-acting, low-dose sulfonamide, in normal subjects and in patients with pustular acne. The study was stimulated by the successful use of the drug in patients with cystic and pustular acne who were receiving concomitant ultraviolet light therapy.[2]

Method

GROUP A: One hundred healthy white male volunteers were used in this study which was carried out during July and August, 1959. Criteria for selection of subjects were: no previous history of photosensitivity; no previous ingestion of sulfadimethoxine; no sun exposure within the preceding three months. At the beginning of the experiment, each of these subjects received graded exposures of ultraviolet light equivalent to ½, 1, 2, 4 and 10 minimal erythema doses (M.E.D.), delivered to 2 areas of skin 1 cm. square on

* Department of Dermatology, School of Medicine, University of Pennsylvania.]
† Madribon®, Hoffmann-La Roche Inc., Nutley, New Jersey.

1. Perry, H. O., & Winklemann, R. K., *J.A.M.A.*, 169:127,1959.
2. Cahn, M. M., & Levy, E. J., *Ann. New York Acad. Sc.*, 82:84,1959.

the upper back. A Westinghouse fluorescent sunlamp (FS40T12) was used which delivers a continuous spectral range of ultraviolet radiation between 2850 A° and 3150 A°, (corresponding to the shorter ultraviolet radiation spectrum of natural sunlight).

In the ensuing 5-week test period, each subject received two sulfadimethoxine tablets (1.0 gm.) daily, and was out in the sun each day between noon and 2:00 P.M., weather permitting. All men wore undershirts and trousers, so that shoulders, arms and face were exposed, but the back remained covered.

At the conclusion of the study, the graded ultraviolet light test exposures with the FS40T12 lamp were repeated on other previously unexposed sites on the back.

GROUP B: An additional 147 patients (84 females, 63 males) with pustular acne vulgaris were treated with sulfadimethoxine in doses ranging from 0.25 gm. to 0.5 gm. daily, for periods of 2 to 4 months, between May 1st and September 1st, 1959. During this period they were urged to expose themselves to sunlight daily. Many even spe a part of the time at seashore r sorts. They also received week exposures to the face and ne from the FS40T12 fluoresce ultraviolet lamp.

Results

GROUP A: The amount of u traviolet light required to indu minimal erythema and erythe mas of increasing intensity wit increasing exposure was not a tered. After 5 weeks of dai sunlight exposure, no photose sitivity reactions were observe

GROUP B: After 2 to 4 mont of sulfadimethoxine therapy a concomitant exposure to natur sunlight, including weekly trea ment with the FS40T12 sunlam no patient developed heighten or altered reactions to ultravio let light.

Summary

No clinical or experimentall produced photosensitivity to su fadimethoxine was observed i this study on 100 healthy whi males, and 147 patients with pu tular acne vulgaris.

None of the 247 subjects d veloped any side effects fro sulfadimethoxine ingestion.◀

linical Study of Reserpine in Aggressive sychotic Patients

CARL A. SCHWARTZ, M.D., *Austin, Minnesota,* and
HARPER WILLIS, JR., M.D., *Minneapolis, Minnesota*

This antihypertensive agent was dministered to 23 elderly female pa-ents, most of whom were schizo-hrenic, and all of whom were select-d on the basis of their high degree of ssaultiveness. A general improve-ent was noted in most patients and de effects were controlled by dimin-hed dosage in all but 3 cases.◀

I was confronted with a prob-m in the management of 110 ighly disturbed patients in a ocked cottage. The majority of hese women were chronic chizophrenics while a few had rganic brain disease of various iologies. Members of this group ngaged in a continuous vituper-tive babble and frequent physi-al assaults resulting in bodily njury. Regression in the group as marked. Intercommunica-ion among the patients had de-enerated to physical and verbal buse. Toilet training had been orsaken by many of the pa-ents, presenting a serious prob-m in sanitation. Therapy was commenced by the institution of electroshock therapy (EST) three times weekly for the mark-edly regressed mute patients. Also, because of previous re-ports, it was decided to use re-serpine* in an attempt to modify the aggression and promote some degree of sociability.[1-4]

Method of Study

On the basis of observations made by the nursing personnel, 23 of the most aggressive and as-saultive patients were selected for therapy. This group ranged in age from 46 to 85 years, the average age being 65. They had been hospitalized for 2 to 42 years, average 24 years. Diagno-ses are noted in Table 1.

**Serpasil®*, Ciba Pharmaceutical Products, Inc., Summit, N. J.

1. Ayd, F. J., *Am. J. Psychiatry,* 113:16-21, 1956.
2. Kline, N. S., *Ann. New York Acad. Sc.,* 59:107-1954.
3. Hoffman, J. L., & Konchequl, L., *Ann. New York Acad. Sc.,* 61:144,1955.
4. Fogel, E. J., *Dis. Nerv. System,* 17:322-323, 1956.

TABLE 1

DIAGNOSIS OF PATIENTS SELECTED FOR *SERPASIL* THERAPY

	NUMBER OF PATIENTS
Schizophrenia	
Hebephrenic	5
Paranoid	5
Catatonic	5
Chronic brain syndrome	4
Mental deficiency	2
Alzheimer-Pick's disease	1
Manic-depressive psychosis	1
TOTAL	23

Response Evaluation

The following points were used to evaluate patient response to therapy:

1. Individual patient quiescence or noisiness
2. Individual restfulness and sleep
3. Total personal hygiene
4. Sociability with staff and other patients
5. Physical assaultiveness
6. Verbal assaultiveness
7. Participation in occupational therapy

Reserpine was given to these patients in oral or intramuscular doses, to a total of 2 to 10 mg. daily—in most cases 4 to 6 mg. daily as initial therapy. After three or four weeks, this was increased or decreased to maintenance dosage depending on individual response. There is a certain lag in patient response, so at least two weeks should be allowed to elapse before evaluating response to a given dosage schedule. Observations were continued over a six-month period of time. All other psychotherapeutic medications were discontinued. It was decided not to perform special laboratory tests or blood pressure readings on this group, with the idea that these measures might be anxiety-producing. Five typical cases (all women) representing various psychopathology in the group are given in detail:

Instructive Cases

CASE 1

A woman of 47 of Polish extraction first institutionalized in 1933 with a diagnosis of hebephrenic schizophrenia, had previously been hospitalized for pulmonary tuberculosis, which was now considered inactive. She was also an epileptic. She had been very aggressive, was fairly tidy, but her contact with reality was poor. She ha

lusions and hallucinations and was f-decorative.

She was started on 4 mg. and was ll maintained on the same dosage x months later. Her aggressivity was minished and there were no incients of any physical combativeness. er tidiness remained essentially the me. Her contact with reality imroved and she was able to visit her latives for the first time. She conued to have delusions and hallucitions, but was no longer disturbed them. She is now a quiet, cooperave patient on the ward. The number epileptic seizures have diminished the last five months. Also there has en no evidence of any physical disbility due to the medication.

Case 2

A single Austrian woman of 60 admitted in 1917 with a diagnosis of atatonic schizophrenia, was regressed, ad hallucinations, was shy and seclusive, but on occasions had outbursts of xtreme violence. She was started on mg. daily. There has been great improvement in her aggressive behavior; here have been no outbursts of violence; her contact has improved and he now talks in a reasonable manner nd is tidy. She is still being maintained on 4 mg.

Case 3

A Czechoslovakian housewife of 82 dmitted in 1950 with a diagnosis of hronic brain syndrome with senile rain disease with psychosis, had been very suspicious and hostile with delusions of being poisoned. She was verbally hostile to all of the other patients in the cottage and had been known to strike out in anger.

She was placed on 4 mg. daily. On his dosage the patient has shown marked decrease in her hostile behavior. Her contact is improved and she is now able to carry on long conversations. Now whenever she becomes angry, she comes to the ward office and asks for assistance. The patient is still maintained on 4 mg. a day without unfavorable effect and has shown great improvement.

Case 4

A German woman of 70 was admitted 35 years ago with a diagnosis of "mental deficient, idiopathic, severe." She has shown extreme verbal hostility. When frustrated she would strike out at patients and has physically injured some of them. She was fairly neat in appearance and a good ward worker. After starting her on 4 mg. daily the patient became much less verbally aggressive and there were no episodes of physical violence. After a month of medication it was discontinued because of an attack of bilateral viral pneumonia, which proved critical but from which she gradually recovered. While off therapy aggressive behavior recurred. After a period of three months, she was again placed on 4 mg. daily, and soon her behavior was again excellent. Only occasionally does she become verbally hostile. There has been no violent activity.

Case 5

A woman of 53 admitted in 1938 with a diagnosis of paranoid schizophrenia, had a bilateral prefrontal lobotomy soon afterward. Hallucinations and delusions of persecution continued and on many occasions she became highly agitated and physically violent. In general, her behavior to ward personnel was pleasant. However, when displeased she quickly became abusive and physically violent. The patient was placed on 4 mg. daily. There have been no episodes of violence or aggressive verbal hostility since that date; she is well maintained on this dose as of four months later and has become a cooperative patient, able to join in all activities around the hospital.

Results and Comments

Of the 23 patients receiving reserpine, 21 showed some degree of improvement on the performance scale employed. It was

necessary to discontinue the drug in three cases because of side effects of tremor, lethargy and difficulty in gait. These side effects appeared in other patients of the group, but were controlled by reducing the dosage.

Two patients in this group were suffering from a rather severe dermatitis when therapy was started. One was under a dermatologist's care. While on reserpine therapy, the dermatitis of both patients healed; one of them received no other therapy.

During this six-month study, it was noted that noise in the cottage decreased and group supervision was facilitated. The patients slept better and were more active during the waking hours. Soiling with feces and urine decreased greatly and the group as a whole showed greater interest in personal hygiene. Patients who had remained aloof evidenced new interest in group activity. Verbal abusiveness continued but on a reduced scale. There has been little transmission of threats into physical violence, and physical encounters that have occurred have been less violent. More of these patients entered occupational therapy, and several were for the first time permitted to leave their locked ward and work around the hospital grounds.

Summary and Conclusions

Reserpine in dosage of 4 to 10 mg. per day was given to 23 severely aggressive psychotic patients for a period of 6 months and effects evaluated on a general behavior scale. It was found useful in controlling violence and aggressive behavior, improving useful activity, social intercourse and personal hygiene.

Side effects were few and necessitated discontinuance of therapy in only three patients. Side effects such as tremor, lethargy and difficulty in gait were effectively controlled in several cases by adjustment of dosage.

General improvement in aggressiveness decreased the patient accident rate and facilitated nursing care.◀

The Therapeutic Value of Sodium Dextro-Thyroxine Medication*

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►*Reduction of from 20 to 35 per cent in the average cholesterol value was produced in 67 patients by administration of from 2 to 16 mg. of dextro-thyroxine daily. In addition, this compound maintained normal oxygen metabolism with less cardiac stimulation than the levo form of thyroxine.*◄

In general the levo-rotary isomers of amino acids have been found to possess the significant specific biologic activity of the molecule, whereas the dextro-isomers are inactive, or, if minimally active, to have no biologic importance. Clinical and pharmacologic experience[1] during the last decade with a pure preparation of sodium dextro-thyroxine indicates that the dextro-isomer of the thyroxine molecule has the following characteristics:

1. Minimal activity in calorigenesis which may be made up for, if desired, by massive dosage.

2. Equal or greater activity in lipid metabolism.

3. Partial but effective function in the hypothalmic-pituitary-thyroid homeostatic feedback mechanism, i.e., it can suppress pituitary thyrotropic hormone secretion.

4. Little activity in catecholamine physiology, perhaps because of the levo-rotary requirements of the levo-rotary epinephrine.[2]

Clinical Evidence of Purity

Clinical tests indicate the purity of this product but clinical studies, which may be regarded as biologic tests, are even better evidence of purity.

The inter-complex isoelectric

*From the Los Angeles County Hospital Attending Staff Association. Supported in part by USPHS grant #2430, and in part by Baxter Laboratories, Inc., Morton Grove, Illinois, who have provided for several years supplies of sodium levo-thyroxine (Synthroid®), and sodium dextro-thyroxine (Choloxin™). Read at the Scientific Assembly of the American Therapeutic Society, Miami, June 1960. To be published in full in *Clinical Pharmacology and Therapeutics*.

**Emeritus Professor of Medicine, University of Southern California.

1. Starr, P., *A.M.A. Arch. Int. Med.*, 101:722-730,1958.

2. Greene, R., & Farran, H. E., *Brit. M.J.*, 1:1057-60,1958.

baseline of the electrocardiogram in patients with complete athyreosis is very sensitive to the administration of sodium levo-thyroxine; in one patient as little as 25 mcg. a day by mouth produced normal T waves after two weeks. In another similar patient, the administration of 2 mg. (i.e., nearly 100 times as much) daily of sodium dextro-thyroxine did not produce any T waves in 30 days. This suggests that less than 1% of levo-thyroxine is contained in the dextro- preparation.

Further clinical evidence of the purity of sodium dextro-thyroxine preparation is given by the following case report.

A postoperative myxedema patient experienced angina pectoris on as little as 0.075 mg. daily by mouth of sodium levo-thyroxine. Substitution of sodium dextro-thyroxine in daily oral dosage of 4.0 mg. produced a normal basal metabolic rate (BMR), a reduction of serum cholesterol from 350 mg.% to 205 mg.% with no angina pectoris during observation for seven months. Reinstitution of 0.1 mg. daily of sodium levo-thyroxine by mouth was followed in one week by the recurrence of angina pectoris for a 30-day period, and a rise of serum cholesterol again to 345 mg.%. Discontinuance of sodium levo-thyroxine and resumption of 4.0 mg. daily of sodium dextro-thyroxine medication was again associated with the cessation of angina, and the reduction of serum cholesterol to normal. Comparison of the dose of 75 mcg. of sodium levo-thyroxine with that of 4.0 mg. of sodium dextro-thyroxine would indicate that the latter could not contain as much as 2% of the former.

A further clinical experience, making it seem likely that the dextro-thyroxine preparation free of the levo-isomer, is provided by the BMR's of euthyroid patients receiving very large amounts of sodium dextro-thyroxine. For example, a woman of 38 who has taken 10 mg. daily for many months has a BMR of -20%, which does not rise during this period of time when the serum PBI is over 20 mcg.%. The latter, of course, indicates circulating dextro-thyroxine concentration of more than 3 mcg.%.

Calorigenic Effect in Myxedematous Patients

In contradiction to this apparent lack of calorigenic effect, the dextro-isomer preparation of thyroxine, apparently free of levo-thyroxine, will maintain athyreotic myxedema patients indefinitely in a euthyroid condition. Nine athyreotic patients with initial BMR values of about -40%, serum PBI value of about 1.0 mcg.%, and negligible I^{131} uptake values have been treated from three to 12 months with sodium dextro-thyroxine alone in dosage from 2 to 12 mg. daily by mouth, with resulting normal BMRs, normal serum cholesterol concentrations, normal ECG tracings, and normal subjective and objective findings.

The dose of dextro-thyroxine which restores normal thyroid

mone biochemistry in myxema patients is about 10-fold at of the levo-isomer. It has already been shown that five times much dextro-thyroxine as vo-thyroxine is required daily mouth to produce the same vel of serum thyroxine.

This calorigenic effect of dexo-thyroxine in athyreotic myxematous patients does not invalidate the findings that in such tients an initial minimal dose n be found which lowers sem cholesterol without raising e BMR, or that in euthyroid ypercholesterolemic patients a rge dose of sodium dextro-thyxine will lower the serum choesterol without raising the mebolic rate above normal.[3]

Clinical experience concerning is effect may be summarized as llows:

This preparation of sodium extro-thyroxine has now been en to 67 patients and 22 nor- young men and women, in sages from 2 to 16 mg. by outh daily in some cases for as g as two years.[4] In 20 of these tients with an average cholesol value of 252 mg.%, the erage value during treatment s 200 mg.%, a reduction of %. In the 34 patients with an erage cholesterol of 341 mg.%, average during treatment was 259 mg.%, a fall of 82 mg.%, or 24%. In the 13 patients with high serum cholesterol, over 400 mg.%, the pre-treatment mean being 490 mg.%, the average on treatment was 318 mg.%, a reduction of 172 mg.%, or 35%. In the 22 normocholesterolemic young men and women there was no statistical reduction, but an occasional individual did show a striking effect. No instance of escape or failure to control the serum cholesterol level occurred during several months' treatment in this series.

It is not suggested that this dissociation of biochemical from total calorigenic effect is not also produced by other thyronines or thyroxine analogues. But it does seem that this is accomplished with this preparation without thyrotoxicosis medicamentosa, and without any cardiotoxic effect as indicated either by angina, congestive failure, or ECG changes.

Perhaps the most striking difference between dextro- and levo-isomers of thyroxine is in relation to epinephrine synergism. A striking example of this has already been given in one case. The levo-isomer produced angina pectoris in a dose insufficient to provide normal serum cholesterol concentration, whereas the dextro-isomer did not produce angina in a dose

Starr, P., *J. Clin. Endocrinol. & Metab.*, 20:116-119,1960.
Starr, P., et al., *A.M.A. Arch. Int. Med.*, 105:830,1960.

which was able to control cholesterol metabolism.[5]

Use in Cardiac Insufficiency

Further study of the use of dextro-thyroxine in patients with angina, arrhythmia, and congestive failure is being explored placing the endogenous levo-thyroxine and levo-tri-iodo-thyronine. Whether this will occur as a result of direct TSH suppression by the sodium dextro-thyroxine, or will require the reduction of endogenous thyroid hormone secretion by anti-thyroid drugs or radioactive iodine, it is hoped that the replacement of the levo-isomer by the dextro- will reduce the catecholamine stimulus to the heart and ameliorate the cardiac insufficiency.

It should be emphasized that in the euthyroid cardiac patient to whom dextro-thyroxine may be given, there is a condition which is not present in the athyreotic patient, i.e., the patient's thyroid gland, secreting levo-thyroxine and tri-iodo-thyronine into the circulation as well as hormone in the myocardium and other tissues. The suppressive effect of the dextro-thyroxine on the patient's pituitary thyrotropin and resulting reduction of thyroid hormone secretion must be made use of during the initiation of treatment; at this time and for several weeks the heart is under the influence of both the endogenous levo- and the exogenous dextro-thyroxine. Great variability in the reduction of endogenous secretion in any series of patients may be expected, ranging from no reduction as in Graves' disease, to complete cessation as in hypopituitarism.

For the complete somatic substitution of dextro- for levo-thyroxine to be compatible with general health, it has been necessary to demonstrate that sodium dextro-thyroxine alone will sustain normal biochemistry. The current euthyroid status of the athyreotic myxedema patient described establishes this therapeutic prerequisite.

In summary, sodium dextro-thyroxine has been shown to be an effective non-toxic agent for the reduction of serum cholesterol, presumably with anti-arteriosclerotic protection, and new evidence suggests that in addition it maintains normal oxygen metabolism with less cardiac stimulation than levo-thyroxine.◀

5. Starr, P., *J.A.M.A.*, In Press.

Treatment of Pyogenic Dermatoses with Topical Chloroxylenol

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A topical cream containing chloroxylenol 1% with or without hydrocortisone 1% was found to be highly effective in the treatment of a variety of primary and secondarily infected dermatoses. Evidence of sensitivity or irritation was not encountered in any of the 48 cases treated, nor in postsurgical application.

It is regrettable that the use of synthetic antimicrobials has lagged since the advent of antibiotics. Over the last decade a wide variety of antibiotics has been available for both internal and external infections, but it is now evident that many of these agents are steadily declining in effectiveness,[1] while their widespread use is causing a rising incidence of allergic reactions.

Two and one-half million pounds of antibiotics are produced each year in this country alone, and no one can quarrel with their value in systemic diseases. The countless lives that have been salvaged by these agents make any discussion of long-range penalties seem quite academic. In spite of exhortations in the literature to save them for a rainy day, the profession cannot be criticized unduly if, when confronted with the possibilities of serious bacterial complications in patients who were having a difficult time with primary conditions, it has preferred to let the future look after itself.

Issue can be taken, however, with the use of antibiotics in topical infections. A topical antimicrobial need perform only two rather simple functions—it may control or eliminate primary and usually localized infections of the skin, or it may control or eliminate a secondary infection that has complicated a dermatitis. Emergence of resistant bacterial strains and a sharp increase in allergic reactions consequent upon the widespread use of the antibiotics have seriously hamp-

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1. Editorial, *J.A.M.A.*, 166:1177,1958.

ered their ability to perform these functions. The choice has rapidly narrowed to three or four that are seldom used internally, and with a spectrum of activity that leaves much to be desired. Even here, sensitivity is encountered with surprising frequency.

A mixture of topical antibiotics, to give a wider spectrum of activity than can be realized when each is used alone, is theoretically useful since, in mixed pyogenic infections, it is usually impractical to culture the infecting pathogen, identify it, and institute bacterial sensitivity tests. In practice, such mixtures only compound the possible allergic reactions of the patient. Since pathogenic strains have emerged recently that can resist any one of six or more antibiotics,[2] they are all too often a waste of time and money.

Of the organisms responsible for skin infections, staphylococci are by far the most prevalent,[3] and antibiotic-fast strains have become widely diffused. Certain of these strains have been responsible for serious pyoderma in babies, and for breast abscesses in nursing mothers.[4] They are recovered with increasing frequency from carbuncles, furuncles and boils; and may be the major inhabitants in infectious eczematoid dermatitis, seborrheic dermatitis, intertrigo and pyodermas.

Topical antimicrobials of a non-antibiotic nature should be re-examined in the light of these factors, and recent efforts by the pharmaceutical industry would seem to indicate that this is indeed being done. It is encouraging to note, too, that antibiotic-fast staphylococci may actually have become more susceptible to the action of chemical microbicides.[5]

The chemical antimicrobials have certain properties that are highly desirable in dermatological practice. They are usually less specific in antibacterial range than the antibiotics; they seldom encourage drug-fast strains; they are often microbicidal; and they seldom stimulate allergic antibodies. A great many of these agents have long had such properties, but irritation or toxicity has tended to discourage their employment in the past. A few, however, have more merit than is generally recognized. The present study reports the experience with one of these agents, chloroxylenol, in the treatment of pyogenic dermatoses.

Chemically, chloroxylenol may be considered as a substituted phenol (3,5-dimethyl-4-chlorophenol). Its favorable attributes

2. Koch, M. L., et al., *J.A.M.A.*, 169:99,1959.
3. Lamont, L. C., *Brit. J. Dermat.*, 71:201, 1959.
4. Symposium, *Modern Med.*, 27:87,1959.
5. Klarmann, E. G., *Am. J. Pharm.*, 129:4[illegible] 1957.

clude a surprising lack of toxic properties.[6] Its irritating and sensitizing potentials have been examined by standard techniques; neither initial nor repeat insult patch tests produced any evidence of irritation or sensitization.[7]

For the purpose of this study, chloroxylenol was supplied in a strength of 1% in a typical water-washable cream or as a water-washable cream with hydrocortisone*. In order to test the therapeutic effectiveness of these creams, they were used on a total of 48 patients with either primary or secondary infections. Patients included were from my private practice. As far as possible, patients were chosen who exhibited unusually severe or chronic conditions that had resisted topical antibiotic therapy. The usual simple instructions given were: apply the agent two or three times daily to the affected areas without attempting to rub into the skin. Aluminum acetate compresses were used in the acute phases if indicated, prior to the application of the products studied. Otherwise there was no adjunctive therapy. The specific conditions in which the chloroxylenol products were used are summarized in Table 1.

*Septiderm® Cream, Septiderm-HC® Cream, Aveeno Corporation, New York.

6. Joseph, J. M., *J. Am. Pharm. Assn.*, 41:595, 1952.

7. Joseph, J. M., Unpublished Report.

Results

The response was uniformly excellent in all patients of the series. In 4 cases of seborrheic dermatitis the superimposed infection and eczematization cleared completely. One case of recurrent contact dermatitis of both hands, with intermittent secondary streptococcic infections since 1953, had received radiation therapy, various topical steroids, bland soaks and ointments—with very indifferent results. Therapy with the agent controlled infection and eczematization within seven days.

Chloroxylenol proved particularly effective in refractory cases of atopic dermatitis with secondary infection. Clearance was rapid and there was a subsequent and gratifying improvement in lichenification and pruritus. There was an equally rapid response in the 3 cases of impetigo contagiosa—one case became infection-free within three days.

A demonstration of the thesis that unsuspected sensitivity may well reverse the intended therapeutic effect of topical antibiotics was afforded during the series by a woman patient with a recurrent hand eruption of eight years duration. Clearing of lesions and control of secondary infection occurred in 12 days of topical chloroxylenol therapy. The agent was discontinued after healing was

TABLE 1

RESULTS OF THERAPY WITH 1% CHLOROXYLENOL CREAMS IN PRIMARY AND SECONDARY INFECTIOUS DERMATOSES

	# OF CASES	PRODUCT USED†	DAYS TREATMENT	RESULTS
Primary Bacterial Infections				
Impetigo contagiosa	3	S	3-7	3 cleared
Sycosis barbae	3	S-HC	7-24	2 cleared
Folliculitis, acute	3	S-HC	7-14	3 cleared
Furunculosis, acute	1	S	7	1 cleared
Infectious eczematous dermatitis	4	S-HC	7-10	4 cleared
*Secondary Bacterial Infections**				
Seborrheic dermatitis	5	S-HC	7-21	5 controlled
Atopic dermatitis	4	S-HC	7-21	4 controlled
Paronychia	3	S-HC	7-14	3 controlled
Varicose ulcers	3	S-HC	7-21	3 controlled
Contact dermatitis	9	S-HC	7-14	8 cleared 1 controlled
Burns	3	S	7-36	3 cleared
Psoriasis	1	S	7	1 controlled
Perleche	2	S	3-5	2 cleared
Dermatophytosis	4	S-HC	7-10	4 controlled

†"S" refers to Chloroxylenol 1% *(Septiderm)*; "S-HC" refers to Chloroxylenol 1% with hydrocortisone 1% *(Septiderm HC)*.
*Results refer to the primary dermatitis only. The infections, in all cases, were cleared by virtue of the chloroxylenol.

complete. The condition recurred several weeks later, at which time a standard neomycin ointment was applied. This resulted in a violent exacerbation due to neomycin sensitivity.

The agent was also used following facial planing, excision, curettage, biopsies and minor surgery on patients. Healing was satisfactory and in no case was there evidence of bacterial growth.

Since these creams are intended for control or eradication of surface infections, the underlying disease processes remained as would be expected, in such conditions as seborrheic dermatitis, atopic dermatitis, and varicose ulcers. However, the condition of the process was inevitably improved due to elimination of inflammatory response to the infecting organism.

Summary

1. Patients with a variety of primary and secondarily infected dermatoses were treated with creams containing 1% chloroxylenol, or 1% chloroxylenol with 1% hydrocortisone. Both products were found to be highly effective in all cases. Additionally, the 1% chloroxylenol cream was used after facial planing and minor surgical procedures. In these cases the lesions healed without complications.

2. No evidence of irritation or sensitivity was encountered in any of the 48 patients treated.

3. Creams containing 1% chloroxylenol (with and without 1% hydrocortisone) may be considered both safe and effective in many primary and secondarily infected dermatoses.◀

Fatal Reaction to Sulfobromophthalein

A retired mechanic of 72 was admitted because of cramping in the lower extremities for the past eight years and progressive dyspnea for three years. On admission three years previously for exertional chest pain and asthma, prominent hepatosplenomegaly was found. Liver-function studies, including a sulfobromophthalein test, were within normal limits. Two years before admission an episode of severe substernal chest pain tentatively diagnosed as myocardial infarction responded well to therapy. The patient was a heavy user of alcohol for more than 10 years, but had no history of drug sensitivities.

Urine culture revealed Klebsiella pneumoniae. The white-cell count was 12,500 with 8% eosinophils. The non-protein nitrogen level was 42 mg. per 100 ml. ECG was consistent with anterior myocardial infarction and premature atrial contractions.

Sulfobromophthalein dye (5 mg./kg. of body weight) was given intravenously over a period of 1 minute, shortly after which severe dyspnea with laryngeal stridor and marked cyanosis developed with a rapid, regular pulse and marked wheezing throughout both lung fields. Epinephrine HCl administered intravenously gave no benefit. The patient died within three minutes of onset of symptoms. Autopsy revealed edema of the larynx, with excessive mucus in the tracheobronchial tree, severe arteriosclerosis and fibrosis of the myocardium from an old infarction.

Stecher, J. L., *New England J. Med.*, 261: 963,1959.

One-Step Management of Fever-Producing Infections

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EDWIN MATLIN, M.D., *Carlisle, Pennsylvania*

►*Of 159 ambulatory patients having upper respiratory, gastrointestinal, and urogenital symptoms, 150 responded favorably to a low-dosage, chemotherapeutic antihistaminic combination. In most cases reduction of fever and remission of symptoms were observable. Side effects, seen in 15, ceased on withdrawal.*◄

The ambulatory patient with a mild infection of the upper respiratory tract desires immediate relief of congestion, myalgia and other discomforts, control of the infection and prevention of sequelae so he can remain on the job. When the patient is acutely ill with fever, he requires more urgent attention to the spreading infection as well as prevention of complications — otitis media, sinusitis, bronchitis, pneumonia, and involvement of the urinary system. In office practice it is usually not feasible to identify the invading organism or organisms before initiating treatment. The prime considerations are to relieve discomfort and to kee the patient ambulatory for ec nomic reasons in the adult, an to avoid absences in the schoo age child.

Despite the established pla of the new sulfonamides in an bacterial therapy,[1,2] their use h been neglected. They often pr sent no problem of organism r sistance,[3,4] they have a low si effect liability[5] and offer the a vantages of low cost, conven ence of oral administration an broad-spectrum activity.[6]

Effective control of upper re piratory, gastrointestinal an genitourinary fever-producin infections was obtained in ou practices with a new antibacteri al, sulfadimethoxine,* a low-do

*Madribon®, Roche Laboratories, Nutley, N

1. Boger, W. P., Antibiotics Annual, 19 1959, Medical Encyclopedia, Inc., New Yo 1959, p. 48.
2. Flippin, H. F., *Clin. Med.*, 6:817,1959.
3. Weil, A. J., *New York J. Med.*, 58:31 1958.
4. Leming, B. H., Jr., et al., *Antibiot. Me & Clin. Ther.*, 6:32,1959.
5. Yow, E. M., *Ann. Int. Med.*, 43:323,1955.
6. Lehr, D., *Modern Med.*, 111,1955.

ge, lo g-acting sulfonamide[7-11] hat has been combined with the ntihist mine phenindamine tar- rate, n analgesic-antipyretic N-acet l-p-aminophenol), and physiological stimulant (caf- eine).†

To te t the feasibility, practi- ality, and primarily the effec- iveness of a one-step manage- nent, the preparation was em- loyed in the routine treatment f patients with infections of the pper respiratory, gastrointesti- al and urogenital tracts.

Case Material and Methods

The study comprised an unse- ected group of 159 office pa- ients (82 males and 77 females) with such infections. Among omplications were duodenal ul- er, congestive failure grade II, sthma and ventricular hyper- rophy. Most of the patients were dults, up to 78 years, but chil- iren and infants of 8 to 12 months were included.

In nearly all cases, except of children, the dosage was two capsules initially (each contain- ng 125 mg. sulfadimethoxine), and 1 capsule q.i.d. thereafter. For infants, the capsule content was mixed with the formula. The duration of treatment ranged from one day to three weeks, 143 receiving the medication for one week or less.

Remission of clinical symp- toms reflected the clearing of the infection. All patients were ex- amined for possible side effects.

Results

Table 1 shows the results of therapy in patients by diagnostic categories. Based on remission of symptoms, results were "Ex- cellent" in 78.6% of the cases, "Improved" in 15.7%—a total of 94.3% effectiveness (in 150 out of 159 patients).

There were 9 patients (5.7%) who failed to improve. Three of these had coryza, and in all three treatment was discontinued af- ter two days because of the ap- pearance of dizziness, nausea, and vomiting. In one of the two cases of pharyngitis, the patient admittedly did not follow the prescribed routine. One of the two gastroenteritis patients de- veloped a rash and treatment was discontinued after two days. Thus, of the nine who failed to improve, only four showed no response to the medication after what was considered to be a fair trial.

Three patients were main- tained on the drug for three weeks, but results were consid- ered excellent in the particular

Madricidin®, Roche Laboratories, Nutley, N.J.

7. Ironson, H. P., & Patel, C., *Antibiot. Med. & Clin. Ther.*, 6:40,1959.

8. Elia, J. C., *Antibiot. Med. & Clin. Ther.*, 6:61,1959.

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TABLE 1

RESULTS OF THERAPY WITH *MADRICIDIN*

DIAGNOSIS	RESULTS OF THERAPY			
	EXCELLENT	IMPROVED	NEGATIVE	TOTALS
Upper Respiratory				
Coryza	13	1	3	17
Nasopharyngitis	5	1		6
Pharyngitis (including Strep.)	32	5	2	39
Tonsillitis (including Strep.)	4	2		6
Laryngitis		1		1
Otitis media	11	4		15
Sinusitis	10	2		12
Other Respiratory				
Bronchitis	10	5		15
Influenza	20	3		23
Pleurisy	1			1
Pneumonia	2			2
Urogenital				
Cystitis	4		1	5
Epididymitis	1			1
Prostatitis	2			2
Salpingitis	1			1
Gastrointestinal				
Gastroenteritis	3		2	5
Intestinal influenza	1			1
Miscellaneous				
Axillary cellulitis	1			1
Bacteremia	1			1
Cervical adenitis	3	1		4
Measles			1	1
TOTALS	125	25	9	159
	78.6%	15.7%	5.7%	100.0%

conditions treated:

1. Epididymitis, post surgery
2. Cystitis (previous attacks had proved resistant to other methods of therapy)
3. Streptococcal pharyngitis (2 years before, patient had acute bacterial endocarditis; throat cultures showed Strep. viridans: long treatment probably prevented recurrence of endocarditis; blood cultures remained sterile)

Controls are practically impossible in private practice, but in three instances medication was withheld to ascertain possible differences in improvement:

CASE 1

Two brothers, aged 6 and 7, were treated at the same time for bronchitis. One was given the drug combination: temperature was normal in 24 hours and he was discharged as cured after 3 days. The second was treated routinely: temperature took 72 hours to return to normal, and after 3 days he still had a severe cough with vomiting.

CASE 2

Four members of the same family were treated at the same time for

pharyngitis. Two adults and one girl, aged 6, were given the drug combination: in all 3, temperature was normal in 24 hours, and the child returned to school after 4 days. The other girl, aged 8, was treated routinely: temperature took 48 hours to return to normal, and the child was out of school for 7 days.

Case 3

The most striking differences were exhibited by one set of male twins, aged 12 months, weighing 26 and 27 pounds, both with anterior cervical adenitis. The first was started on the drug combination immediately and continued for 6 days; temperature normal in 36 hours; glands enlarged 10 days (non-tender).

The second was started on routine symptomatic treatment; after 3 days the child was toxic and the gland continued to increase in size; the drug combination was begun and continued for 6 days; temperature was normal in 48 hours; gland was enlarged for 2 weeks (non-tender).

One or more of the following side effects occurred in 15 patients: dizziness, drowsiness, dry throat, grogginess, headache, itching, light-headedness, malaise, nausea, rash, and vomiting. All of the reactions disappeared with cessation of treatment.

Before it was decided to experiment with the drug combination, 46 patients with infections similar to those in Table 1 were treated with sulfadimethoxine, 2 tablets (1.0 gm.) initially, and 1 (0.5 gm.) per day thereafter. With three exceptions, treatment lasted from 3 to 11 days. The exceptions were 2 cases of furunculosis (15 days) and 1 of cystitis during catheterization for incontinence (31 days): results in all 3 were excellent.

If we omit 6 cases of gastroenteritis, which in our experience did not respond too successfully to either medication, results were comparable to those obtained with the combination: 59.5% excellent, 31.0% improved and 9.5% negative. No side effects were observed or reported.

Summary and Conclusions

A total of 159 patients with a variety of respiratory, urogenital and gastrointestinal infections were treated with a sulfonamide-containing preparation.

In 150 patients (94.3%) the response was either excellent or satisfactory.

The antihistamine component of the preparation helped to clear the distressing symptoms of respiratory infections, while sulfadimethoxine attacked the infection itself. Only in one case of measles and one each of gastroenteritis, pharyngitis and cystitis were the results poor.

In three instances where controls were possible in a family situation, reduction of fever and remission of symptoms were considerably slower in the controls than in the patients receiving the combination.

In only 15 cases was medication discontinued because of

side effects; these disappeared with cessation of treatment.

A preliminary study of sulfadimethoxine in a series of 46 patients with respiratory, urogenital and gastrointestinal infections yielded results comparable to those obtained with the dru combination.

The over-all picture appear favorable to both drugs, and par ticularly to the use of the com bination for one-step manage ment of the common infection encountered in office practice.

Cirrhotic Ascites: Response to Aldosterone Antagonist

The effectiveness of spironolactone (Aldactone), a synthetic steroidal lactone, was evaluated in 8 patients having ascites resistant to sodium restriction and standard diuretics, 5 having required paracentesis at intervals of 2 weeks to 6 months, and hepatic coma being imminent in 2 at start of study. After initial laboratory studies, with patients hospitalized and given a sodium-restricted diet with free fluids, the effect of oral spironolactone was studied when administered alone and when supplemented with prednisone and/or either of 2 diuretics, daily dosage being 600 to 800 mg. for spironolactone, 30 mg. for prednisone, 500 to 1000 mg. for chlorothiazide (Diuril), and 2 ml. for mercaptomerin (Thiomerin).

Increased excretion of sodium, with loss of weight and ascites, followed administration of spironolactone in all patients. Responses occurred after 5 to 7 days of therapy and were greater when the drug was supplement ed with either of the diuretic and most impressive when pred nisone also was added. Increase dietary sodium, tried in 2 case was well tolerated during ther apy, and no toxic reactions n neuropsychiatric complication were seen.

It is concluded that:

1. Spironolactone eliminate need for other methods current recommended for treatment refractory ascites (i.e., repeate paracentesis, portal-systemi shunt, bilateral adrenalectomy medication with amphenone).

2. Supplementation with a d uretic is desirable, but predni sone should be withheld unles other drugs prove ineffective.

3. When chlorothiazide is use with spironolactone supplement ary potassium is needed to com pensate for the increased urinar loss.

4. Less rigidity in dietary so dium intake may be possibl with this therapy.

Clowdus, B. F., et al., *Proc. Staff Meet., Mayo Clinic*, 35:97-105,1960.

ysipelas in Pregnancy with Fatal ermination

HARRY N. JUROW, M.D., and
ROSEMARY CLARK, M.D., *San Francisco, California*

During pregnancy the patient sus- ed an insect bite, causing local- swelling and requiring hospital- ion. Edema slowly progressed and unrelieved by antibiotics. Death urred following the delivery of an nt in good condition. Autopsy re- led congested brain, partial lung lapse, and engorged liver.◀

A para 3, gravida 7 of 32 had infected incomplete abortion 4½ months and an uncompli- ted incomplete abortion five ars later at 2½ months. Three ing children were delivered rmally. The pregnancies and erperiums were uneventful. he patient gave a history of taneous reaction to penicillin d allegedly was sensitive to ny other drugs.

Course of Last Pregnancy

Course was uneventful until e eighth month, when slight welling over the right cheek veloped after an insect bite. he next day her physician administered a calcium preparation and prescribed an antihistamine. The swelling persisted and gave moderate discomfort. The following day another physician gave an injection and prescribed cold compresses. No improvement was noted, and the patient consulted a dermatologist. Three days later there was swelling of right cheek and bridge of the nose, and pain and tenderness to the angle of the right jaw. No cervical adenopathy was noted, and the parotid regions, oral cavity, pulse and temperature were normal. An intramuscular injection of 30 mg. of ACTH was given. Diphenhydramine HCl (Benadryl) 50 mg. three times daily by mouth and ice packs to the face were also prescribed. After three days edema had extended to the forehead and right ear, although swelling of the right cheek diminished. ACTH 30 mg. was repeated and prednisone three times daily added to



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References: 1. Steigmann, F., et al.: Am. J. Gastroenterol. 33:109 (Jan.) 1960. 2. Hock, C. W.: to be published. 3. Leming, B. H., Jr.: Clin. Med. 6:423 (Mar.) 1959. 4. Data in Roerig Medical Department Files.

†brand of hydroxyzine

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he regimen. The temperature remained normal.

Ten days following onset the patient was seen at her home in increased pain, her temperature at this time being 101.8°. The edema had spread over the entire face, chin, and neck. Since she had given a history of penicillin sensitivity, therapy was started with chlortetracycline (Aureomycin) 500 mg. by mouth every six hours. On admission the same day hemoglobin was 10.9 gm.%, packed blood cell volume 35 and white cell count 12,300. Nonfilamented cells were 32, lymphocytes 1%, and monocytes 4. Sedimentation rate was 57 mm. per hour.

Therapy was continued with chlortetracycline 500 mg. every six hours, in addition to which meperidine HCl (Demerol) 50 mg. was given every four hours for pain. Smears taken from the left ear and from the bullae on the neck showed gram-positive cocci, cultures disclosing hemolytic streptococci sensitive to tetracycline, penicillin, and streptomycin. By the afternoon of day of admission temperature was 102.7° F., and early that evening the disease process had extended to the upper one-fourth of the chest, with hemorrhagic bullae on the skin in this region. A definite advancing border was observable. The temperature soon dropped to 100° F., pulse to 98, and the patient seemed more comfortable. Erythromycin, 500 mg. by mouth every six hours was given in addition to the chlortetracycline.

Early on the eleventh day after onset the patient precipitously delivered a living 6¼ lb. girl. No lacerations or abnormal bleeding occurred. The blood pressure at this time was 128/80, pulse 100 and respiration 24. Five hours after delivery blood pressure was 98/78, pulse 126 and respiration 26, moderate dyspnea being noted. A solution of 5% dextrose in distilled water was administered intravenously, and 2 cc. methoxamine HCl and oxygen by nasal catheter were also given. Six hours after delivery the blood pressure was 84/70, pulse 90, respiration 24, and temperature 100°. Hemoglobin at this time was 17.8 gm.%, white cell count 6,100, filamented cells 34, nonfilamented cells 39, lymphocytes 17, and packed blood cell volume 56.

The patient was given 500 cc. whole blood and 500 cc. 5% dextrose in distilled water, to which was added 100 mg. of hydrocortisone. Lanatoside C, 8 mg. was given slowly by intravenous injection because of progressive shock, increasing gallop rhythm, and sinus tachycardia. Streptomycin, 0.5 gm. every 12 hours, was also given. After a brief period of improvement,

blood pressure dropped to 60/0, pulse rose to 140, and respiratory distress increased. Levarterenol bitartrate as well as an additional 4 mg. of lanatoside C and 100 mg. of hydrocortisone were added to the fluids being given intravenously. The patient became cyanotic and died the following day.

The baby, whose condition remained good, was discharged four days later.

Findings at Autopsy

The pleural cavities contained clear fluid (800 cc. left, and 50 cc. right) in which floated yellow fibrinous clots. The organs, including the brain, were acutely congested, and the lungs had undergone partial collapse of the lower lobes. The liver weighed 3,000 gm., an abnormal amount of blood flowing from its cut surface.◀

J.A.M.A., 170:1299-1302,1959.

Neurotic and Psychotic Depressions: Management

Successful treatment of depression is closely linked with the correct evaluation and management of anxiety in the original syndrome or the anxiety induced by treatment. Sedation threshold findings indicate that a high level of neurotic anxiety is associated with an unfavorable response to electroconvulsive therapy (ECT), and that ECT tends to accentuate anxiety or induce it after several treatments. A common response of neurotic depressions to ECT consists of relief of depressive symptoms with relapse in one to 2 weeks after treatments are stopped. Drugs offer the treatment of choice, with concurrent sedation being given. If ECT is given with drugs, the former should be limited to 3 or 4 treatments. Formal psychotherapy may be initiated concurrently with drug therapy.

Patients with psychotic types of depression, whether manic-depressive, involutional or psychotic depressive reactions, may be treated either by ECT, by imipramine or a similarly potent drug, or a combination of both. In patients in whom the distinction between neurotic and psychotic depression remains in doubt, drug therapy should be administered first. Continued observation may help to clarify the picture and the complications of ECT, which may retard progress if the case is one of neurotic depression, will be avoided.

Shagass, C., *Missouri Med.*, 57:23-29,1960.

Vitamin B_{12} and Folic Acid in Medical Practice

EDWARD H. REISNER, JR., M.D., *New York, New York*

►B_{12} is used for pernicious anemia, as a growth factor in children and an appetite builder in geriatrics. Folic acid is used for sprue, nutritional macrocytic anemias, and pernicious anemia of pregnancy. The two cannot be used interchangeably, but administration of one speeds up reactions of the other.◄

Vitamin B_{12} and folic acid are both essential, the administration of one speeding up reactions involving the other. Although they have much in common and their lack produces the same pathologic picture in the blood, they cannot be used interchangeably. Vitamin B_{12} is the deficient factor in the patient with pernicious anemia, while folic acid is contraindicated in this disorder. Sprue responds well to folic acid given by mouth or parenterally, and to B_{12} given parenterally. There are two groups of sprue patients, one showing a normal absorption of vitamin B_{12} (for which treatment with folic acid alone should be sufficient), the other failing to absorb B_{12}, even in the presence of adequate amounts of intrinsic factor (for which injections of B_{12} are required in addition to folic acid by mouth). Since few practitioners have the means of distinguishing to which group a sprue patient belongs, vitamin B_{12} and folic acid should be given in all cases.

Nutritional macrocytic anemias such as megaloblastic anemia of infancy and "pernicious anemia" of pregnancy should be treated with folic acid and vitamin C, daily dosage of the former being 5 mg. until remission. The other conditions will ordinarily not recur if deficient diet is rectified. The dosage of vitamin B_{12} for the patient with pernicious anemia without cord disease is 50 mcg. by intramuscular injection weekly. Maintenance dosage at monthly intervals will maintain hematologic remission but often produces

low serum vitamin B_{12} levels, for which reason it would appear better to treat such cases every two weeks. Patients with cord disease should be treated with 50 mcg. injections of vitamin B_{12} twice weekly until remission, then maintenance injections once a week. It is possible to treat pernicious anemia with complete success by the weekly administration of 1000 mcg. of B_{12} by mouth (twice weekly for patients with cord disease).

Vitamin B_{12} has been recommended as a growth factor and tonic for children and as a tonic and appetite builder for geriatric patients. The use of the vitamin in those who seem to be growing poorly because of poor nutrition is rational and will do no harm. It is doubtful if doses larger than 20 mcg. daily by mouth are justified for this purpose. Although low serum levels of vitamin B_{12} in some elderly persons are improved by supplementing the diet with this vitamin, there frequently is no associated clinical aberration in these cases, the patients often feeling fine both before and after administration of the vitamin.◀

Pennsylvania M.J., 62:1105-1107,1959.



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Exchange Transfusion for Salicylate Intoxication

JUANITA B. RENTSCH, M.D., *Glastonbury, Connecticut* and
ALISON BRADLEY, M.D., and
STUART B. MARSH, M.D., *Hartford, Connecticut*

►*Two children who had ingested potentially lethal amounts of salicylate recovered without sequelae after treatment by exchange transfusion. This procedure appears as effective as hemodialysis and has the advantage of requiring relatively simple equipment already available in most general hospitals.*◄

Acetylsalicylic acid is responsible for more poison cases treated in hospital emergency rooms than any other single substance. Of the total deaths due to accidental poisoning in the United States in the years 1952 to 1956, salicylates were responsible for 441 or 7.7 per cent, 380 of these or 70 per cent being in children under age 5. Mortality under age 5 is 25 times higher than in any other age group. The lethal dose of acetylsalicylic acid is not known, but deaths have been reported from ingestion of only 2 gm. (30 grains). Some 40 to 60 per cent of the reported ingestions of methyl salicylate (wintergreen oil) have been fatal, 4 to 8 cc. (equivalent to 2.7 to 5.4 gm. acetylsalicylic acid) being estimated as the lethal dose.

The artificial kidney and exchange transfusion have been advised for removal of excessive salicylate from the body. Two cases are presented to show that exchange transfusion is practical and effective:

Case 1

A boy aged 2 weighing 25 lbs. (11.4 kg.) ingested in the 2 hours prior to admission about 15 gm. acetylsalicylic acid, during the prior 36 hours having been given paregoric and six to eight 105-mg. doses of acetylsalicylic acid for mild diarrhea. Emesis induced at home was productive of small chunks of acetylsalicylic acid. Gastric lavage with about 1 liter isotonic saline was done on arrival. Though fairly well oriented at this time, he was crying and sweating, the temperature being 100°F., pulse 160, blood pressure 90/60. An infusion of 1000 cc. 5% dextrose in water was started 2½ hours after ingestion, 400 cc. M/6 sodium lactate being added at 5½ hours. During this

time there was involuntary shaking with profuse sweating, the pulse rising to 200 and respirations to 80 and the blood pressure stabilizing at 90/40. He was thirsty but vomited oral fluids, becoming cyanotic during vomiting. There was circumoral cyanosis at 6½ hours and he was disoriented and thrashing about. A 9 hours vitamin C 100 mg. and vitamin K 10 mg. were added.

Exchange transfusion was started at 11½ hours through a No. 20 polyethylene catheter inserted into the femoral vein. At this time respirations were still 80 and he was disoriented, hyperreactive and sweating. During the early stages of the exchange there were periods of alternating pallor and cyanosis, increasing tachycardia and tachypnea. The catheter being inadvertently pulled out, a cutdown on the saphenofemoral junction was done and a No. 18 polyethylene catheter introduced via the saphenous vein into the internal iliac. The exchange was then completed, a total of 1210 cc. whole blood being removed and 1285 cc. replaced in 6 hours.

After conclusion of the exchange (17½ hours after ingestion) the boy was sleeping but could be roused easily. Respirations were 34, pulse 140, rectal temperature 101.6°F. The hematocrit reading being 30, with signs of overhydration, he was given 200 cc. whole blood the second day. He was discharged the third day with no complications.

The salicylate level, after ingestion of about 1.4 gm./kg., rose from 73 mg.% at 4 hours to 79 at 9 hours, dropping to 71 at 11½ hours, to 51 at the conclusion of the exchange transfusion, to 25 at 45 hours and to 0 at 69 hours. CO_2-combining power dropped from 15 mEq./liter at 6 hours to 11.5 at 9 hours, rising to 23 at 11½ hours and being maintained there at 45 hours. Potassium dropped during the exchange transfusion from 3.4 mEq./liter to 2.12, raising to 3.0 at 45 hours.

Comment: Exchange proving technically much easier through the larger catheter in the iliac vein, this is recommended as the route of choice for this age group.

Case 2

A boy aged 3 weighing 31½ lb. (14.3 kg.) ingested 60 cc. wintergreen oil, vomiting spontaneously 15 minutes later. Given a salt and water mixture on the advice of a physician, he continued to vomit every half hour until admission 4½ hours after ingestion. He presented with flushed face, lethargy and dehydration, the temperature being 98°F., pulse 140, respirations 32 and blood pressure 110/70. Deep tendon reflexes were equal and 4+ bilaterally. The urine showed 4+ acetone. A mixture of 250 cc. isotonic saline in 1000 cc. 5% dextrose was started. Exchange transfusion was started 11 hours after ingestion through a No. 20 polyethylene catheter inserted into the iliac vein via a cutdown on the saphenofemoral junction, a total of 800 cc. whole blood being exchanged in 4 hours. The boy became almost comatose during the procedure, temperature at that time being 99.4°F., pulse 140, respirations 24, and blood pressure 96/50.

The next morning, 19 hours after ingestion, respirations were 26 and less deep than previously, and he became more alert. Oral fluid still being vomited, during this day he was given an infusion of 750 cc. isotonic saline in 1000 cc. 5% dextrose with 20 mEq. potassium and 600,000 units penicillin added. The third day he was more alert and retained fluids, these being supplemented by a mixture of 250 cc. isotonic saline in 750 cc. 5% dextrose and 20 mEq. potassium. On the fourth day (at 67 hours) he appeared recovered and the cutdown was removed. He was discharged on the sixth day and a follow-up report some weeks later showed he was completely well.

The salicylate level, after ingestion of wintergreen oil in an amount equivalent to 2.13 gm./kg., was 69 mg.% at 4½ hours, dropping to 38.6 at 19 hours (4 hours after exchange transfusion) to 32.3 at 25½ hours, to 17 at 43 hours

d to 0 at 67 hours. CO_2-combining wer rose from 15 mEq./liter at 4½ urs to 25 at 19 hours and was 22 at hours. Potassium rose from 3.1 Eq./liter at 19 hours to 3.6 at 43 urs and to 4.3 at 67 hours.

Pharmacology and Symptoms

Salicylate is rapidly distributed throughout the body. About per cent is excreted in the rst 24 hours, traces remaining r two to three days. Seventy er cent is excreted in the urine, per cent is oxidized in the ssues, and a small amount is st in perspiration. Falling of he salicylate blood level cannot e taken as a sign that the danger is past since persistent effects f high tissue concentrations are pparently as important as the eight to which the blood level ises, and death may come two o three days after ingestion. here is an initial direct action n the respiratory center leading o hyperventilation and respiratory alkalosis. In severe intoxications a metabolic acidosis may levelop, the time varying in different patients. Other salicylate effects include hyperglycemia nd ketosis, hypoprothrombinemia, antipyrexia with resultant diaphoresis, and steroid-like actions.

Initially, salicylates cause central nervous system stimulation with excitement, disorientation and increased muscular activity, followed in severe cases by a central nervous system depression resulting in stupor and circulatory and respiratory failure. Vomiting usually occurs one to three hours after ingestion. Hyperpnea, the cardinal symptom, usually begins within three to eight hours and is of the Kussmaul type, often being misdiagnosed as diabetic acidosis. Many patients have a high fever and perspire profusely. Hemorrhagic phenomena may occur. In fatal cases autopsy shows bleeding throughout the body, especially in the brain. There is cerebral edema and a severe cloudy swelling in the cells of the liver, kidney and heart.

Treatment

Gastric lavage is indicated as soon as possible if the patient is seen before the stage of hyperventilation. After the lavage, intravenous fluids should be started. If the general clinical picture suggests acidosis, an alkaline solution such as M/6 sodium lactate or 2% sodium bicarbonate should be used. A low blood pH indicates the beginning of the acidotic phase. If pH determinations are not available, alkalinization should be started six to eight hours after ingestion. Vitamin K should be given in a dose of 1 mg. for every gram of salicylate ingested. Vitamin C is also recommended, and oxygen is indicated if convulsions occur or

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It greatly increases the secretion of respiratory tract fluid,[2] which makes sputum less viscid and easier to raise,[2-4] makes tracheal and bronchial cilia more efficient,[3,5] and acts as a demulcent.[1-3,6]

Thus Robitussin increases the probability that a cough will achieve its natural purpose—i.e., to remove irritants such as exudates and mucus from the respiratory tract.[1,4,5]

references: 1. Blanchard, K., and Ford, R. A., J.-Lancet, 74:433, 1954. 2. Cass, L. J., and Frederik, W. S., Am. Pract. Dig. Treat., 2:844, 1951. 3. Hayes, E. W., and Jacobs, L. S., Dis. Chest, 30:441, 1956. 4. Blanchard, K., and Ford, R. A., Clin. Med., 3:961, 1956. 5. Blanchard, K., and Ford, R. A., Rocky Mt. M. J., 52:278, 1955. 6. Boyd, E. M., et al., Can. M. Assoc. J., 54:216, 1946.

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appear imminent. In severe cases exchange transfusion may be lifesaving.

Indications

Only nine detailed case reports of exogenous intoxication treated by exchange transfusion have been reported. All patients survived among whom were five infants aged 11 to 28 months treated for salicylate poisoning.

Although indications are difficult to specify, exchange transfusion should probably be considered if the salicylate level exceeds 40 mg.%, decision being individualized according to severity of symptoms. Although the literature includes report of a child aged 2 who ingested 11.7 gm. acetylsalicylic acid and recovered despite a salicylate level of 73 mg.%, salicylate levels in fatal cases ranged in one series from 33 to 44 mg.% and in another from 20 to 45 mg.%.◀

A.M.A. J. Dis. Child., 98:778-785,1959.

Rheumatoid Arthritis: Treatment with Gold Salts

The broad program followed by 369 patients consisted of a minimum of 3 weeks strict bed rest initially, along with non-weight-bearing exercises, psychotherapy, analgesics, sedation, orthopedic aids, steroid therapy (when indicated), and gold salts by intramuscular injection. The control group (566 patients) followed the same program except they received small doses of a hemolytic streptococcus vaccine in place of gold salts.

Gold sodium thiomalate (Myochrysine) or aurothioglucose (Solganal) was given in doses of 10 mg., then 20 mg., increasing to 40 mg. weekly. When 500 mg. had been given (modified if clinical status indicated) and marked improvement had occurred, the dosage was gradually decreased. Otherwise, the 40 mg. was given weekly until 900 to 1000 mg. had been given, and then decreased as improvement was noticed. Finally, all patients, at the end of the period of decreasing dosage, were given 10 mg. monthly. There were no deaths and no serious reactions. Of those who showed some evidence of sensitivity, at least 50% were able to resume gold salt therapy in reduced dosage.

Results in the gold-treated group showed that 213 (57%) had major, 130 (35%) minor, and 26 (7%) no response. Of the controls, 219 (38%) had major, 270 (48%) minor, and 77 (11%) no response to therapy.

Lockie, L. M., *J. Florida M.A.*, 46:821-824, 1960.

in cardiac edema of varying severity weight loss ranged from 4 to 45 lbs. on



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MILTON E. EISEN, M.D., *New York, New York*

An inflatable garment, extending from the waist to the lower third of the thigh, is worn daily with the patient lying down one hour for a period of three weeks. Of 77 patients, 66 were able to reduce dosages of drugs and return to their usual occupations because of relief from pain obtained.

A new type of therapeutic garment for specific types of vascular disease and coincidental low back pain is a medical application of the space suit used by military aviation in jet flight. Dilation of both arterioles and veins is prevented by means of air pressure. Peripheral resistance is maintained by the support given to the arterioles, the air pressure on both thighs and abdomen helping to maintain an improved venous return and cardiac output. Venous return is determined chiefly by:

1. In normal individuals, contractions of skeletal muscles squeezing the veins contained within them and driving the blood toward the heart.

2. With each inspiration increase of negative pressure in the pleural cavity aspirates blood towards the heart, as a result of which the diaphragm descends, raising the intra-abdominal pressure and squeezing blood out of the abdominal veins.

3. Any factor which constricts the veins, thus decreasing their capacity, increases the return of venous blood to the heart.

Other things being equal, an increase in venous return increases the cardiac output if the heart is normal. In cardiac failure, arteriosclerotic heart disease, and auricular fibrillation, a decrease in venous return may improve the performance of the heart.

The garment is made of nylon, fully lined with a thin inflatable rubber bladder. It extends from the waist to the lower third of the thigh. The upper third of

the posterior aspect consists of a firm, boned inflatable section, the seat of fine elastic mesh. Directly below this mesh is a crotch, removable without deflation or removal of the garment. The suit is inflated through a small valve with a hand inflator. This garment is worn daily with the patient lying down one hour for a period of three weeks, then similarly used three times weekly for the next three weeks.

Of 77 patients with specific conditions of low back pain coincidental with circulatory diseases who received considerable relief of pain while receiving therapy with this garment, 66 were able to return to their usu occupations. Nine had inade quate relief. Few had obtaine relief of pain from corset, lumbo sacral or sacroiliac support.

During therapy with this gar ment the dosages of barbiturates analgesics, and nitroglycerin previously required for sleepin and relief of pain could be re duced. Most patients after hav ing been bedridden were able t walk and exert themselves wit very little pain or cardiac embar rassment when wearing the suit Maintenance therapy is advo cated for from three to si months.◀

New York J. Med., 59:3794-3799,1959.



A New Approach to Therapy of Breast Cancer

G. WHYTE WATSON, M. B., F.R.C.S. Ed., and
ROBERT L. TURNER, M.D., *Bradford, England*

On the assumption that tumors are particularly susceptible to antimitotic agents before metastases appear, an alkylating agent was combined with testosterone and given to 34 patients, including some having had mastectomy. Results indicate that chemotherapy produces most satisfactory results combined with surgery.

The best results of surgery and radiation in treating breast cancer offer no reason for complacency, and it is difficult to foresee any improvement from existing methods which assume that the disease in the early stages is localized in the breast and adjacent lymph nodes. Even when apparently early, the condition may already be beyond effective reach of treatment. The prognosis is equivocal: a woman under 30 is almost certainly doomed within a year, especially if her breast cancer arises during pregnancy or lactation, but the woman over 65 has a better prognosis. The outlook between these ages is completely uncertain save in the known advanced case.

Recent work involving endocrine ablation offers further prospects in the late breast cancer, but even with such radical measures as pituitary ablation or bilateral adrenalectomy with oophorectomy, positive palliative results are obtained only in some 50% of cases, and a good remission lasting a year or longer in less than 25%. A similar remission in a minority of women in any age group may be obtained with androgen therapy, especially when the symptoms are due to bony metastases. Eventually, irrespective of the nature of the endocrine therapy employed, the tumor ceases to respond and death of the patient follows. This is due to an apparent change in the growth pattern of the neoplasm from one of endocrine (presumably estrogen) dependency, to a truly autonomous type, and may arise from a se-

lective breeding out of the estrogen-dependent cells under endocrine therapy.

It should be possible to prevent the emergence of the endocrine-resistant strain of cancer cells by the simultaneous administration of an antimitotic drug. The antimitotic drugs, notably the alkylating agents, have been used with considerable success in the therapy of the reticuloses.

Reasoning for Trial of a Combination of Two Methods

It is reasonable to assume that during the process of metastasis the tumor cells are more susceptible to antimitotic agents and endocrine therapy than later, when the metastases have become established in distant organs. It would appear logical to begin systemic therapy as soon as possible after diagnosis, in view of the tendency of breast cancer to disseminate early.

Patients with Cade type 2 cancers, as well as those with more advanced cancers, were admitted to the trial. It was decided to use testosterone with oophorectomy as the endocrine part of the therapy. Triethylene thiophosphoramide (Thiotepa) was chosen as the alkylating agent, after it had shown effectiveness against metastasizing mammary carcinoma in the rat, and in trials in a variety of advanced human cancers to have some selective action in human breast cancer.

Testosterone has a marked protein-anabolic action in the body and tends to stimulate hematopoiesis, which action it was thought might help to counteract the marrow-depressant action of Thiotepa. Testosterone and triethylene thiophosphoramide inhibit cancer growth by a different method. Any patient whose hemoglobin level was 10 gm.% or below was given a transfusion of concentrated cells, this repeated during the course of therapy if the patient's hemoglobin fell below 10 gm.%. Cortisone, 100 mg. daily, was given to three patients who developed thrombocytopenia with extensive purpura during therapy, this withdrawn after the purpura cleared. In two patients with massive edema of the arm on the affected side, systemic hyaluronidase was administered.

Application of the Reasoning

Simple mastectomy, using diathermy, was carried out in 11 previously untreated cases, in three at onset of treatment in order to verify the diagnosis and in eight between the first and second courses of triethylene thiophosphoramide or after a varying period of time after completion of the second course. An injection of 30 mg. of the alkylating agent was given at the time of operation to these pa-

ents to take care of any viable mor emboli liberated into the ood stream by the operative ocedure. Oophorectomy was erformed on those still menruating.

Initially only those patients ith widely disseminated lesions, those having recurrences afr radiation or surgery, were mitted to the trial. Subsequently, when the efficacy of the eatment was established, any tient with a carcinoma of the east irrespective of the stage the disease was included. In ch case the diagnosis was conrmed by histologic examinaon. Before therapy was begun complete clinical essay was ade by two independent obervers.

The group ultimately consistd of 34 patients aged 23 to 76, 7 still being within the menrche. In four of the remainder he growth had begun during the menarche. One patient aged 23 as pregnant, and 18 patients ad recurrent lesions or metases following surgical or radiaon therapy. In four of these 18 e recurrence began between hree and seven years after their riginal treatment, in the reaining 14 within three years. f the 16 patients having had no revious treatment, seven were ype 2, this classification being ltered in two after discovery of econdary growths in the ovaries at oophorectomy. The remaining nine previously untreated patients had advanced cancers with metastatic lesions in the viscera and skeleton. The known duration of the cancer prior to chemotherapy was nine months to eight years in the previously treated group, and from two months to two years in the untreated group. All patients were thoroughly examined and their progress was recorded.

Results

Results indicate that the two drugs had synergistic effects. Objective improvement was obtained in 30 cases (88%), whereas tumor regression may be expected in only 33% of breast cancers treated with testosterone, or in 30% treated with triethylene thiophosphoramide alone. The enhanced effect of using testosterone and triethylene thiophosphoramide jointly may be due to some synergistic action between the two drugs, but it is more probably due to the much greater total dose of the alkylating agent that could be used in the patients receiving testosterone before marrow depression occurred. It may be possible to synthesize an ethyleneimino compound of testosterone. Clinical trial of such a drug in breast cancer would be of great interest.

Reasons for Employing Chemotherapy

Many considerations finally forced abandonment of radiotherapy in favor of chemotherapy as an essential part of the primary treatment of early breast cancer. Although effectiveness of treatment has been noted from histologic studies of the tumors and the absolute regression of the axillary lymphadenopathy has been obtained, proof of total eradication of their cancers may only be derived from progress studies over the succeeding years. A major difficulty was deciding when chemotherapy should be stopped. Although apparent eradication of the growth with healing in skeletal and other metastases can be easily demonstrated, it cannot be deduced that all the cancer cells are dead. Patients were therefore put on a periodic maintenance dose of triethylene thiophosphoramide. Again experience and time are required to decide whether the present maintenance dose is adequate.

Resistant strains of cancer cells may emerge following eradication of the susceptible cells by triethylene thiophosphoramide. It may be necessary in the future to use other antimitotic agents instead of, or in combination with, this agent. Wider use of chemotherapy as an alternative to radiation should be made in breast cancer.

Summary

Thirty-four cases of breast cancer at various stages were treated with either triethylene thiophosphoramide alone or with testosterone. Marked tumor inhibitory effects were obtained in 30 patients. The most satisfactory results were obtained in the group receiving both drugs. A trial of surgery and chemotherapy, as opposed to surgery and radiation, is advocated for early breast cancers.◀

Brit. M.J., 1:1315-1320,1959.

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Ergotamine Tartrate for Treatment of Migraine

ARNOLD P. FRIEDMAN, M.D., *New York, New York*

►*Patients were given one suppository containing 2 mg. ergotamine tartrate and 100 mg. caffeine every half hour, to a total of three suppositories if necessary. Oral administration was effective in 50%, parenteral in 80%. Dihydroergotamine methane-sulfonate is indicated in those who tolerate ergotamine poorly.*◄

In a study of 2500 patients with migraine, ergotamine tartrate proved to be the most useful drug, relief being obtained in 83% by early and adequate administration of ergotamine and caffeine with or without antispasmodic drugs and/or sedatives. The results were little better for any one combination or by oral or rectal route. Oral administration of ergotamine tartrate gave good results in 50% of the patients. Parenterally, this drug or dihydroergotamine was effective in 80%.

The most practical routes are the oral and the rectal. Rectal use has proved most efficacious, especially when the stomach is not retentive. The drug is given early in the attack, and in adequate doses. For each attack the average initial oral dose of a combination containing 1 mg. ergotamine tartrate and 100 mg. caffeine per tablet (Cafergot), is two tablets, followed by one tablet at ½-hour intervals until the necessary effect is produced, or to a total of six tablets. The minimum effective dose must be determined for each patient. The severity of attacks varies from time to time in any patient. The average rectal dose of the ergotamine-caffeine combination is one suppository (2 mg. ergotamine tartrate and 100 mg. caffeine in each suppository) every half hour, to a total of three suppositories if necessary. The maximum dose of ergotamine is 6 to 8 mg. daily, this dose (6 to 8 tablets or 4 suppositories of the combination) not to be employed oftener than once weekly.

The majority of headaches

have been controlled by oral or rectal administration. (Given parenterally, not more than 0.5 mg. simultaneously or 0.25 mg. intravenously should be administered in a single week.) An initial trial uses half a suppository, dosage increased by two or three suppositories for any one attack. After the larger doses the patient may be so sedated as to be unable to carry on his everyday work.

For patients who react poorly to ergotamine tartrate, the use of dihydroergotamine methanesulfonate is indicated, in doses twice as great as those of ergotamine tartrate — 1 mg. intravenously or subcutaneously repeated in an hour if necessary. Either of the two drugs is contraindicated in peripheral vascular diseases, angina pectoris, impaired hepatic or renal function, in intravascular diseases, thyrotoxicosis, cachexia, avitaminosis, or pregnancy.

If persistent paresthesias, substernal oppression, pain in the abdomen or extremities, tachycardia, or bradycardia develop, therapy should be discontinued. Most of these effects are transitory and indicate the need for stabilization of dosage and control of side-effects. In a patient sensitive to the drug, itching and edema may develop. Muscle spasm of the extremities can be ameliorated by massage or exercise, nausea and vomiting and intestinal spasm by the use of atropine sulfate 0.65 mg., chlorpromazine (Thorazine) 50 to 75 mg., or prochlorperazine (Compazine) 10 to 15 mg. Serious effects probably occur in 0.01% of patients.◀

New York J. Med., 59:2359-2366,1959.

Cerebral Arteriography: Incidence of Complications

During a 10-month period when sodium diatrizoate 50% (Hypaque) was used as the contrast medium, the incidence of complications in a consecutive series of 500 cerebral arteriograms was only 6% as compared to 19% in a consecutive series of 546 during a 4½-year period when iodopyracet 30% (Diodrast) had been used. In the later series there were only 3 deaths, serious complications in 5.2% and permanent sequelae in 2%, whereas there had been 8 deaths, serious complications in 12% and permanent sequelae in 3% in the earlier series. In the later series the incidence of complications from vertebral arteriography was 12.3% as compared to 5.2% after carotid arteriography.

Silverstein, A., & Krieger, H. P., *J. Mt. Sinai Hosp.*, 27:1-4,1960.

The Legal and Medical Aspects of Vasectomy

RICHARD C. DONNELLY, J.S.D., and
WILLIAM L. F. FERBER, M.D., *New York, New York*

▶*Hereditary afflictions, problems of repeated pregnancy, or other physical or mental states affecting an adequate parenthood may necessitate sterilization or vasectomy. Full consideration of physiologic and legal consequences may make it necessary for the family physician to recommend additional consultation.*◀

Physicians should take a strong stand for a broad and humane interpretation of such terms as "medical necessity" and "sound therapeutic reasons." Sterilization may be safely performed on therapeutic grounds when, in the opinion of the physician, parenthood at any future time would be a threat to the patient's physical or mental health and well-being. Each case must be individually considered.

Some of the indications are as follows:

1. Afflictions of a hereditary nature involving previous offspring of a marriage, or in some instances the involvement of one or both actual or potential parents.

2. Conditions aggravated by repeated pregnancies.

3. Physical or mental states which may seriously impair the patient's functioning as an adequate parent .

4. Multiparity to a degree affecting adversely the patient's health or well-being.

When sterilization is indicated in the marital situation, it makes no difference from a legal point of view whether it is the wife or the husband who is sterilized. A vasectomy may be performed on the husband when a medical contraindication to pregnancy exists in his wife. Vasectomy is a simple procedure, rarely followed by complication. Libido and potency are in no way reduced, and actually may be enhanced by the removal of fear of pregnancy. The procedure is surgically reversible in many instances.

Of 14 vas resections for sterilization done in the past 18 months, 12 were done under local procaine anesthesia. Seminal fluids were examined repeatedly after operation in each instance until complete azoospermia was noted. In no case were spermatozoa found 8 weeks after vasectomy, in 5 instances none after 2 weeks. It is imperative that semen analysis be repeated until no spermatozoa are found.

With Respect to All Patients

1. When, in the opinion of the examining physician, an operation is indicated, a written opinion should be rendered stating the indications warranting it.

2. Before any sterilization operation is performed, the written consent of the patient, and spouse if there be one, should be obtained.

3. When anything in the patient's history or behavior during the interview raises any question concerning his capacity to consent to the operation, there should be a psychiatric examination and determination concerning his capacity.

With Respect to Minors and Incompetent Persons

Minors may not be deemed capable of legally effective consent to a sterilization operation. A person may not understand the nature and consequences of the operation and may be otherwise not competent to consent to its performance. In such cases, the sterilization may still be performed after following these steps:

1. There should be a written medical finding that the condition indicating the advisability of sterilization is a permanent one, not likely to improve to the point where sterilization would no longer be indicated. In the case of the sterilization of an incompetent person under the age of 21, added precaution should be taken to determine this to the greatest possible degree of certainty.

2. There should be an additional written finding that the condition which renders the patient incapable of consent to the operation will probably not improve to the point where the patient at a future time will be legally competent to consent, if this be the case.

3. A physician's report recommending sterilization of a minor, or of an incompetent, or other person not capable of legal consent who might later improve to the point of being competent to consent to the operation, should indicate why it is deemed advisable not to postpone the operation until the patient reaches 21, becomes competent, or proves to be permanently incompetent.



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4. The written consent of the parent, guardian, or other person responsible for the patient's care and support should be obtained in addition to the written consent of the patient. If the minor or incompetent is a ward of a probate or other court, the court's approval should also be obtained.

Although sterilization of convenience for contraceptive purposes alone is not advocated, it is worthwhile to consider briefly the legal aspects of sterilization on such grounds. The central issue is whether the patient can validly consent to the operation, assuming he is mentally capable of doing so. Consent is never a defense in an action against a physician based on his negligent or incompetent performance of an operation. Consent would be no defense to a criminal prosecution based on a statute specifically forbidding the operation.

A sterilization of convenience of one party to a marriage without the consent of the other would be a ground for divorce and might subject the operating physician to civil liability. If both partners to a marriage consent to a sterilization of convenience the physician should not be held civilly liable.

If a wife becomes pregnant and has a child after the sterilization of her husband (to which she consented) it is doubtful whether there is any civil liability on the part of the physician.

In all of the situations described it is assumed that the operation was performed competently and without negligence.◀

J. Urol., 81:259-263,1959.

Febrile Seizures

A controlled study of 47 patients having febrile seizures showed that those with prolonged seizures and EEG abnormalities were more likely to develop recurrent seizures than those without. Phenobarbital 3.8 mg./kg. daily, was given only at the time of each febrile episode to 19 patients and continuously to 21 patients. There was no significant difference in the number of recurrences. Diphenylhydantoin sodium was given continuously to 7 patients, all of whom had recurrent seizures. Continuous anticonvulsant therapy should be given only to patients having seizures with minimal fever and those suffering from nonfebrile seizures. For those with febrile seizures alone, relatively large doses of phenobarbital should be given (along with antipyretics) only when earliest signs of infection occur.

Millichap, J. G., et al., *J. Pediat.*, 56:364-368, 1960.

Current Status of Therapy in Microbial Food Poisoning

G. M. DACK, M.D., *Chicago, Illinois*

Poisoning with types A and B of Cl. botulinum, staphylococci, salmonella, and streptococci are seen in this country. Treatment of the latter three is largely symptomatic, with 50,000 units each of A and B botulinum antitoxin recommended for botulism. Antibiotics prevent secondary infections.

Microbial food poisoning is a frequent cause of acute illness of short duration. When the physician arrives convalescence may be well under way. Because of the transient nature of this illness and the tendency for rapid convalescence, the general practitioner usually has had little opportunity to study it.

Such poisoning falls into 2 main categories:

1. One in which the causative microbes grow in a food and elaborate an exotoxin, e.g., botulism and staphylococcus poisoning.

2. One in which the causative living organisms multiply in a food product, and large numbers are required to produce infection, e.g., salmonella infections, food poisoning from certain streptococci, and from B. cereus and Cl. perfrigens.

Implicated food may suggest the causative agent. The symptoms and their time of onset after a specific meal are useful in directing attention to the causative agents.

Botulism

Outbreaks of botulism are rare. In the United States the majority of such outbreaks are related to the eating of poorly processed home canned vegetables of low-acid content, e.g., string beans and beets. Usually there is evidence of spoilage by off-odors or flavors of such foods. Growth of the common types A and B of Cl. botulinum in meat products is accompanied by gross evidence of putrefaction and the meat is not eaten. In some homes, spoiled canned foods are given to chickens which develop limber-

neck and die (this providing useful clues leading to the diagnosis of botulism).

Five types of Cl. botulinum are recognized. The toxin appears to interfere with the production of acetylcholine, since muscle in a physiologic preparation poisoned by botulinum toxin will contract when acetylcholine is injected intra-arterially. A muscle in a similar preparation poisoned by curare does not react when treated with acetylcholine. Small amounts of either type A or type B toxin decrease the synthesis of acetylcholine in both *in vivo* and *in vitro* experiments. Some investigators have suggested an interaction of toxin with the fine unmyelinated nerve fibers entering the end-plate region, thus causing a block of the nerve impulses. When the mechanism of the mode of action of botulinum toxin is discovered, perhaps a better treatment of the disease will be forthcoming. Until such a time, the only specific treatment is administration of antitoxin of the type causing the illness. Each toxin is neutralized by a specific antitoxin.

The treatment of botulism is at best unsatisfactory, and the mortality in the United States is about 65%. When examining patients with symptoms suggesting botulism, determine whether low-acid, home canned foods have been consumed from one to three days previously. When symptoms are well advanced, antitoxin therapy is of little value. However, antitoxin will prevent damage by the toxin which is not already fixed in the central nervous system. At least 50,000 units of each of type A and B botulinum antitoxin should be given intramuscularly after the patient has been tested for hypersensitivity and (if necessary) desensitized. At least 10,000 units diluted in 5 or 10% dextrose injection may be administered intravenously every 18 to 24 hours.

Enemas remove toxin which has been retained in the bowel. To prevent aspiration pneumonia, fluids orally should be avoided when pharyngeal weakness or paralysis are present. Mouth and throat secretions should be removed continuously with a soft rubber tube and an aspirating machine. Fluid and electrolyte balance are maintained with intravenous injections of dextrose and sodium chloride. Oxygen is administered for cyanosis, and artificial respiration may be required. There is no agreement on the value of respirators. For shock, whole blood and plasma should be given. Antibiotics and sulfonamides in appropriate amounts prevent secondary infections. The patient should be kept at as nearly complete rest

as possible.

If persons having eaten less of the incriminated food are treated before the symptoms appear, there is an excellent chance that prophylactic benefit will be achieved. Antitoxin should always be administered.

Staphylococcic Food Poisoning

This is the most common type encountered in the United States. Since staphylococci are ubiquitous, it is impossible to protect foods from them. Enterotoxin-producing strains causing acne and other pyogenic infections may be imparted to food through handling. Many apparently normal food handlers carry food poisoning strains in the nose and throat. Staphylococci can withstand high concentrations of sugar and salt, and for that reason certain foods may serve as a selective medium for them. In order for an outbreak to occur, there must be a food-poisoning strain and a food in which it will grow. Five to seven hours at a warm temperature are sufficient for enterotoxin to develop. Enterotoxin may be produced *in vivo* when the organism is confined to pyogenic lesions in the body or in the intestinal tract, where the normal intestinal flora is abolished by the action of large doses of broad spectrum antibiotics.

The short incubation period is characteristic, especially when many persons develop similar symptoms after an identical meal. Large amounts of enterotoxin produce symptoms in from 45 minutes to two hours. Death may follow in debilitated persons or in very young children.

Vomiting and diarrhea are nature's effective methods for disposing of unabsorbed enterotoxin. Abdominal pain may be relieved by codeine (30 to 60 mg.), or morphine (10 to 15 mg.). Fluid balance is restored by sodium chloride injection with 5% dextrose, 2000 to 4000 cc. in 24 hours. Recovery is rapid. Caffeine sodium benzoate (500 mg. parenterally) may be required for severe prostration. Plasma and blood may be necessary. Broad spectrum antibiotics should not be given.

Salmonella Infections

There are 600 serotypes of salmonellae. Those of typhoid and paratyphoid fevers are not considered here, only some 40 other types. Salmonellae, found most commonly in the intestines of poultry and swine, produce infection in both cold and warm blooded animals. They are present on the shells of eggs, and, when eggs are broken commercially, they find their way into frozen whole eggs, yolks, whites, and in dried egg products. These commercial egg products are

used in the preparation of many foods including "convenience" foods, some of which are inadequately processed to destroy viable salmonellae.

The clinical picture of salmonellae infection is one of gastroenteritis. This is mostly mild, although a few cases develop typhoidal symptoms with resultant fatalities. Complications are uncommon, but include thrombosis, thrombophlebitis, pyelitis, osteomyelitis, dehydration and toxemia, arthritis, and, in young children, meningitis. Vomiting occurs occasionally. Small numbers of organisms may produce no illness but a carrier state.

Treatment is largely symptomatic and similar to that for staphylococcal food poisoning. Salmonella serotypes have r sponded to chloramphenicol. A antibiotic effective *in vitr* against a specific strain shoul be used in adequate dosage, wit due precautions against side e fects.

Streptococcic Food Poisoning

Food poisoning by alpha hemo lytic streptococci presents symp toms identical with those caused by B. cereus and Cl. perfringens i.e., cramps and diarrhea, with only occasional vomiting two t 12 hours after eating a food con taining many millions of thes organisms per gram. The strep tococcus causing several out breaks has been found to be a enterococcus.◀

J.A.M.A., 172:929-932,1960.

Paroxysmal Tachycardia in Utero

Some 200 such cases have been reported but only 13 described. Although the earliest reported onset was during the sixth month, in most cases onset is not until the eighth month. Heart action in the 13 described cases was in 8 of the auricular type. Etiology was not established in any of the 13 cases. Of 6 cyanotic and requiring oxygen at birth, all recovered. None was premature. Of the 3 sections carried out, 2 were done in th belief that the tachycardia indi cated intrauterine asphyxia. I has been emphasized that intra uterine tachycardia presents n danger to the fetus, that i should not cause hastening o the delivery, and that it is les dangerous to await spontaneou delivery. In an additional case the tachycardia disappeared 30 minutes before delivery.

Muller-Schmid, P., *Geburtsh. u. Frauenh.*, 19 401-407,1959.

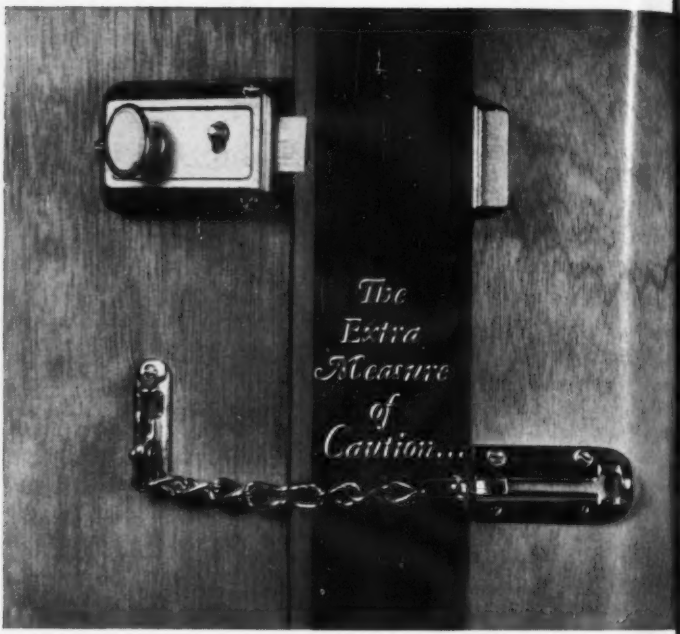
hiopental Treatment of Phobic Anxiety epersonalization Syndrome

A. KING, M.D., and J. C. LITTLE, M.D., *London, England*

Symptoms were largely or wholly dicated in a series of 32 chronical- ll patients after a course of thio- tal sodium 2.5% injections. Im- ved general appearance and sense well-being was noted before amel- ation in psychiatric symptoms. mplete recovery was rare, but ny resumed a normal life.◀

It had been observed that a ries of 10 to 12 injections of iopental sodium (Pentothal) ministered 3 times weekly ought about a cumulative re- f in tension and deperson- zation, even when no abreac- n had taken place. A form of atment was therefore devel- ed, in the course of which % solution is injected at a e sufficient to induce light ep in 15 min. The patient is ven simple explanation and re- surance during induction. The ections are given on alternate ys, and in patients responding provement generally begins er 3 to 4 treatments and continues during the remainder of the course, and in many cases after its termination. Prior to the amelioration in psychiatric symptoms, improvement of general appearance and well-being reminiscent of that seen in the course of electroshock therapy is often observed.

Of a series of 32 patients, many of whom were chronic invalids, 16 became largely or wholly symptom-free after such a course, and 9 were improved. One patient, having been completely housebound and depressed for 10 years, lost her symptoms and resumed a normal life. In a controlled trial, 50% of unselected patients received such a course, 25% had placebo injections and 25% psychotherapy. Before treatment each patient was graded for severity of central and peripheral symptoms. At each followup visit assessments were made on the scale Grade I (recovered or



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reatly improved), Grade II (improved), and Grade III (unchanged).

To date, 44 patients have been followed up for periods of one week and one month, 28 for a period of 3 months. At one week, improvement had occurred in a high proportion in all groups, with an excess Grade I improvement in the thiopentone group (not significant). At one month, Grade I or Grade II improvement had occurred in 80% of the thiopentone-treated cases and in 0% of the control groups. Corresponding figures for self-assessment were 90% and 70%, respectively. At 3 months, improvements in the thiopentone group were maintained, 85% being in Grades I and II, while less than 50% were maintained in these Grades in the control groups.

Complete recovery was rare, but in many patients the symptoms became mild, fleeting and infrequent. A number of patients housebound over many years were able to resume a normal life following thiopentone therapy, while only one case treated by psychotherapy was able to do so.◀

Proc. Roy. Soc. Med., 52:595-596,1959.

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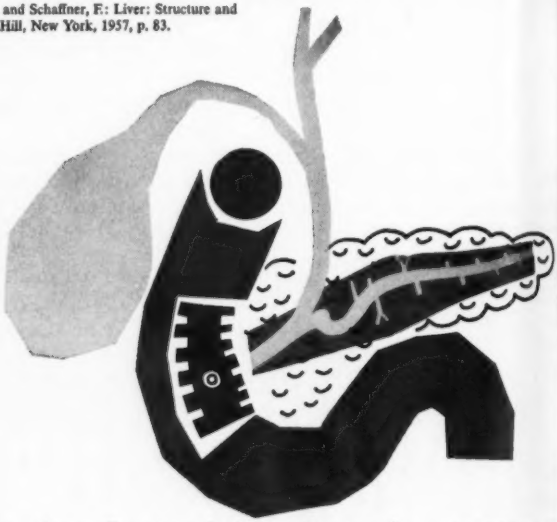
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*Popper, H., and Schaffner, F.: *op. cit.*, p. 84.

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Portal Hypertension Caused by Splenic Thrombophlebitis

ROBERT WALL, M.D., and
EMMERICH VON HAAM, M.D., *Columbus, Ohio*

The patient was admitted following a recurrent syncope, muscular distress, and hematemesis. Abdominal distention was an additional complication of a progressive decline. Consideration of ascites, liver function tests, and post-mortem findings indicated that pathology was due to venous obstruction of portal system.

Presentation of Case

This was the only University Hospital admission of this 59 year old white man who complained of a short episode of syncope seven days prior to admission, followed by vomiting of bright red blood three days prior to admission. From then on the patient had tarry stools. On the next day he had a second episode of syncope. He was seen by his physician who advised hospitalization.

Approximately four years prior to admission the patient was hospitalized for one month at another hospital because of hematemesis, melena, distended abdomen and pedal edema. Roentgenograms at that time revealed esophageal varices, herniation of the gastric mucosa into the duodenal bulb, and a superficial duodenal ulcer. He refused surgical exploration. He admitted that he drank one to two bottles of beer a week and stated that his appetite was good and that he ate regularly. He gave a history of muscular dystrophy since the age of 43; this was very mild initially, but had progressed to the point that his legs were extremely spastic and painful and he could walk only when supported by a chair or person.

Physical Examination

The patient was mentally confused, pale, and in acute muscular distress. His blood pressure was 160/70, pulse rate 110, respiratory rate 35, rectal temperature 99°F. The mucous mem-

In rheumatic disorders

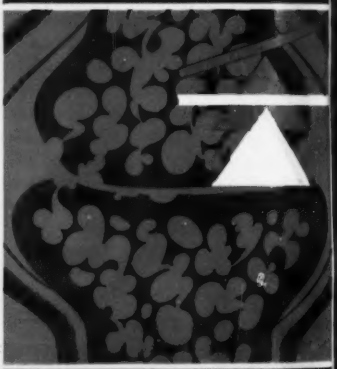
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163-60

anes were pale without jaundice. Examination of the heart as entirely within normal limits. The lungs were clear to percussion and auscultation. The abdomen was markedly distended; he had a small reducible unilateral inguinal hernia and the abdominal wall showed a marked venous distention. The liver and spleen were not palpable. The bowel sounds were hyperactive and there was a tympanitic fluid wave which was interpreted as ascites. His rectal sphincter tone was good; the prostate was nodular. Both legs showed flexor contractures with muscular spasm and markedly hyperactive reflexes.

Laboratory Data

White blood cell count was 12,200 with 73 per cent neutrophils, 23 per cent lymphocytes, 3 per cent eosinophils, and 1 per cent monocytes; hematocrit 14.5 per cent; hemoglobin 3.6 gm.; red blood cell count 2.4 million, with one nucleated red blood cell per 100 white blood cells. *Blood chemistry:* sugar 117 mg.; blood urea nitrogen 30 mg.; prothrombin time 67 per cent; van den Bergh direct 0.3 mg., indirect 1.2 mg.; cephalin flocculation test 1 plus; CO_2 combining power 54 vol.; plasma chlorides 116 mEq.; serum potassium 3 mEq.; sodium 153 mEq.; serum amylase 146 units. Serologic test for syphilis was negative.

His sputum contained gram-positive cocci and gram-negative rods; the culture showed coagulase-positive staphylococcus. Culture of pleural fluid showed a hemolytic coagulase-negative staphylococcus. The urine culture showed a heavy growth of Proteus and a few gamma Enterococci. Cytological examination of thoracentesis fluid showed erythrocytes and acute and chronic inflammatory cells; no malignant cells were seen. Cytological examination of chylous ascites showed acute and chronic inflammatory cells and mesothelial cells. There were also some cells with large hyperchromatic nuclei which appeared highly suspicious of malignancy.

Hospital Course

The patient received a total of 18 units of blood. He again refused surgery and therefore had to be treated conservatively. He continued to bleed moderately. On his fourteenth hospital day he vomited bright red blood and a Patton tube was put down into his stomach. His temperature rose to 104°F. the same day. He was treated with suction and antibiotics. The tube was removed 48 hours later the the patient's condition seemed improved. On the eighteenth hospital day the patient had abdominal distention and started to bleed again. His



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urse went progressively down-ll and he expired on his twen--second hospital day.

Clinical Discussion

DR. WALL: This is a 59 year d man who died 22 days after ing admitted to the hospital. e had syncope seven days and matemesis three days before s admission, and tarry stools om the time of his hemateme-s. All that this really tells us that he had an upper gastro-testinal hemorrhage; the blood owing down his gastrointestinal act and showing up as tarry ools, the syncope possibly being lated to the acute hemorrhage. e bled actually for three days efore we had an opportunity to e him. He had a second episode syncope five days after his first ne and the day before he was dmitted.

After all this bleeding he was en finally by his physician and irected to the hospital. This ems to me an awful late admis-on for somebody who has had is much trouble, but from his ast history we find that this as not new to him, since ap-roximately four years before he ad been in another hospital be-ause of the same problems; he-matemesis, melena, and a dis-ended abdomen and pedal ed-ma. At that time they found sophageal varices and a super-icial duodenal ulcer. Therefore, he had the possibility of bleeding from two sites four years ago.

Prognosis of Bleeding Varices

What are the chances of survival for a man with ascites and hematemesis if we consider that he has esophageal varices obviously related to portal hypertension and hepatic disease? Of such patients with ascites and bleeding, only 50 per cent should survive one year and only 7 per cent should survive five years. Only about 60 per cent of patients with severe hematemesis from varices of the esophagus will survive the first episode of hemorrhage and usually another 30 per cent will survive for one year, although we have all seen patients with esophageal varices who live for a long period of time. So from these considerations we must consider our patient's history at least as unusual.

The patient had also suffered from muscular dystrophy which had been progressive for 16 years. He apparently had a lot of flexion contractures from loss of muscle mass in his lower extremities. When he entered the hospital he was mentally confused but he was apparently not in shock as we gather from his blood pressure recording. His pulse was rapid, his respirations were increased and he was apparently in general distress. He had good clinical evidence for

ascites: a hernia which is so common in people with prolonged ascites, superficial dilated veins over his abdomen, and a fluid wave. His liver and spleen were not palpable, which does not mean that they were not enlarged. If he had this much ascites to be grossly distended it might well be impossible to know whether these organs were enlarged.

His initial laboratory findings merely showed a leukocytosis which would be compatible with his recent hemorrhage. His hematocrit was quite low and he had a comparable hemoglobin and red blood cell count, but his red counts and hemoglobins improved after transfusions up to a level of about 10.8 gm. hemoglobin and then all of a sudden took a nose dive again concomitantly with the clinical note that he bled again. So any changes in his hemoglobin and red counts were related directly to his transfusions or to the blood losses which were observed clinically. His blood urea nitrogen, strangely enough, was only 30 mg., which is not too much in a patient who has been having tarry stools for three days, and it did not increase too much later on, in spite of the fact that he was continuing to bleed.

I am sort of impressed with the fact that his liver function tests were pretty good. The prothrombin was only a couple seconds off the normal control; his van den Bergh was all right; cephalin was only 1 plus, although this is not a really valuable liver function test; and except for some hypokaliemia which subsequently was corrected by the surgeon, his electrolytes were not bad. His amylase was 146, which does not particularly help us, and only his bromsulphalein excretion test showed a significant retention at 11.6 per cent. I would think this would be the only really objective evidence we have for liver damage except the evidence of increased portal pressure, such as ascites, and the esophageal varices which were confirmed by the x-ray examination.

His sputum and pleural fluid contained Staphylococci which presents such a problem in our hospitals at the present time. From his chart I gather that he had without doubt a significant pneumonia. He had a spiking fever, the laboratory grew Staphylococci, and the pulmonary findings were quite compatible with pneumonia.

His ascites was described as chylous which seems important because it means that he had some trouble with his lymphatic drainage. There were cells present which were highly suspicious

f malignancy, which in a chyous fluid should make one beeve that these suspicious cells ere actually malignant cells.

He received 18 units of blood nd they put a Patton tube down, finger-in-the-dike type of approach to hemorrhage from the sophagus, which worked fine. I hink we should remember that atients with a Patton tube obiously do not eat well with a alloon in their esophagus. Some an be fed through the inner luen of the tube, however regurgitation can lead to aspiration f partially ingested food with ossible transient atelectasis and spiration pneumonias. They ook the tube out and about a ay or so later he bled profusely gain from the same site. Shortly hereafter he died with considrable abdominal distention and ulmonary findings which might uggest terminal pneumonia.

Portal Hypertension

I don't think that clinically ne can get any other impression han that this man had some orm of increased portal hypernsion which was progressive ver a four year period of time nd then he finally bled from sophageal varices. What could e the cause of this? Obviously e most common cause is cirrhoss of the liver. Only about 50 er cent of these patients have to be heavy drinkers. One can have cirrhosis when one drinks one to two bottles of beer per week, as this man did. This does not speak against this diagnosis and it would seem a little ridiculous to me to make this a chief argument against it. We always worry about the terminal progressive phase of a cirrhotic. Did he develop a super-imposed hepatitis that tilted the balance of his equilibrium of hepatic function? We have no evidence of intrahepatic obstruction. Another possibility in cirrhotics is that about 4 per cent of them develop hepatomas. The only evidence that we have to suggest this possibility is the finding of suspicious malignant cells in his "chylous" ascites. Hepatomas are very uncommon in this country as compared with China, India or other Asiatic countries.

Are there any other diseases that can cause a cirrhotic-like picture of this long duration and yet not be classical cirrhosis? I can think of only two. One is Wilson's disease of hepatolenticular degeneration which we usually find in children although it can be present in the third and fourth decades and may be slowly progressive. However, this disease rarely presents the clinical symptoms of portal hypertension. They do present mental confusion and a basal ganglion type

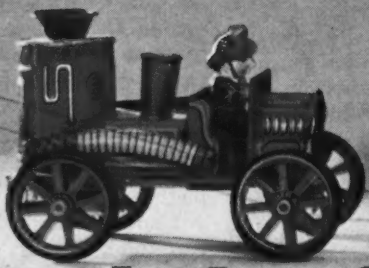
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against gastric distress, digestive upsets, nausea

f muscular spasticity.

It would be very inviting herefore to suggest that this pa-ient had Wilson's disease and hat his progressive muscular isease was not actually muscu-ar dystrophy but caused by his entral nervous lesions related o his abnormal copper metabo-sm. Most of these people have Kayser-Fleischer rings right at he edge of their corneae. Quite requently their liver function ests may be nearly normal and he clinching finding is that these eople have a tremendously in-reased copper excretion in the rine. They also have a reduc-ion of a very unusual protein n their blood called ceruloplas-nin, which is a copper-transport rotein. Whether this man did ave Wilson's disease is any-ody's guess, I think.

Another heavy metal that pro-uces a cirrhosis-like picture is ron. Could this man have hemo-hromatosis? We can think about , since the patient is a man and would be extremely unusual in woman. Their cirrhosis can go he way of any other cirrhosis vith portal hypertension, ascites, tc. However, there was no pig-nentation of his skin and he was ot a diabetic. It would be very ifficult for me to believe that his man had cirrhosis for four ears, severe enough to almost leed to death and still did not have diabetes. Obviously the important test to rule out this diagnosis would be a serum iron, which was not done.

Portal Vein Thrombosis

There is a distinct possibility that he may have had no cirrhosis but portal or splenic vein thrombosis. Primary splenic vein thrombosis would be very unusual for this duration of time, however it is a possibility, since it may come on very insidiously. It would seem to me a great tragedy if this is what he had, because four years ago he could have been operated upon and cured. He was obviously in no shape for surgery at this last admission. Four years ago nobody was doing splenoportograms but now we can get pretty good pictures of vascular obstruction with splenoporto - photography. He also could have cirrhosis of the liver with portal hypertension and then developed thrombosis of the splenic vessels as a terminal event.

Conclusion

I believe that he had portal hypertension on the basis of cirrhosis of the liver with the possibility of a primary hepatoma. If we really accept these malignant cells in his chylous ascites fluid we would have to suggest that he had developed a hepatoma superimposed on his long-

standing cirrhosis. I also believe that he had terminal pneumonia and I am not suggesting it because everybody has it at autopsy, but I would think that he had a specific bacterial pneumonia. These are my final diagnoses; I know of no other.

Clinical Diagnosis

1. Cirrhosis of the liver with ascites and bleeding esophageal varices.
2. Hepatoma (?)
3. Bronchopneumonia.
4. Muscular dystrophy.

Pathological Diagnosis

1. Splenic vein thrombosis with ascites and bleeding esophageal varices.
2. Aspiration pneumonia.
3. Septicemia.
4. Muscular dystrophy.

Pathological Discussion

DR. VON HAAM: The gross autopsy showed a markedly distended abdomen which contained 4000 cc. of yellow cloudy fluid. The pleural cavities contained about 200 cc. fluid each. The heart was normal in size and showed moderate dilatation of the ventricles. The lungs showed partial atelectasis and the bronchi contained aspirated gastric contents. The spleen weighed 425 grams and was soft and mushy. The splenic vein was completely occluded by an organized thrombus which was partially calcified. The liver weighed 170 grams and appeared grossly normal. The pancreas was normal. The esophagus showed multiple varicosities; the mucosa appeared ulcerated. The stomach mucosa appeared atrophic. The large intestines were filled with semi-liquid tarry material. The remaining organs showed no gross pathology.

Microscopic Examination

Sections from the heart and lungs showed abscesses with bacterial colonization. Sections from the liver showed no evidence of cirrhosis or any other disease. Sections from the spleen showed severe congestion with fibrosis of the pulp, some recent infarcts and areas of iron-calcium incrustation (Gandy-Gamna nodules). Sections from the splenic vein showed a progressive thrombosis, partially organized, partially recent. The vessel wall showed inflammatory changes of non-specific chronic phlebitis. Sections from the esophagus showed severe submucosal varices with ulceration of the overlying mucosa. The stomach appeared only moderately atrophic. The kidneys showed mild chronic pyelonephritis.

Summary

Our diagnosis was that of primary thrombophlebitis of the

lenic vein causing venous ob-
ruction within the portal sys-
m with esophageal varices and
cites. It is the "tragic diagno-
" Dr. Wall referred to. The
gative liver tests were borne
t by the finding of a normal
er. The chylous appearance
the ascites was probably pro-
ced by a mild lipemia since
e patient always ate regularly,
contrast to patients with liver
rrhosis who lose their appe-
es. The suspicious looking
lls in the ascites were meso-
elial cells changed under the
fluence of anoxia, which is a
mmon source of error in our
tological evaluation of ascitic
ids in patients with portal hy-
rtension.

DR. WALL: A liver biopsy, in
ew of the normal liver func-
n tests and the portal hyper-
nsion followed by a spleno-
rtogram, would have clinched
e diagnosis and saved this pa-
ent's life. The patient's refusal
surgery at the other hospital
ur years ago proved his doom.
remember a similar case when a man came in bleeding like this and we quickly did liver function tests which were all normal. Within 36 to 48 hours we did a splenoportogram and in another 12 hours we had his spleen removed. He went home in seven days and has been fine ever since.

DR. VON HAAM: I think there is one more possibility worth mentioning. I am not too happy about his massive ascites which I cannot fully explain by his splenic vein thrombosis. A similar case was described recently in which numerous small arteriovenous aneurysms in the liver were responsible for portal hypertension. The liver appeared normal grossly and microscopically and there was no thrombosis within the portal system. The condition was recognized by hepatic vein catheterization which revealed an increased oxygen content in the blood of the hepatic vein. This certainly represents a very keen diagnosis of a very unusual cause of portal hypertension.◀

Ohio M.J., 55:1667-1670,1959.

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indness Following Carotid tery Thrombosis

A man, aged 77, developed dden blindness in his left eye, sociated with left-sided head- he extending from the frontal ea to the occiput four days ior to hospitalization. Eye ex- ination revealed that visual uity in the right eye was limit- to finger counting at one ter and that the left eye was ally blind. Fundus examina- n of the left eye showed mark- papilledema (3-4 diopters). n general examination blood ssure was 140/80, a carotid lse was palpable on the right t not on the left, and no tem- al artery pulsation was evi- nt on the left side. A diagnosis left common carotid occlusion s made and the patient started anticoagulant therapy. One y later the patient complained losing vision in the right eye. e right pupil was 5 mm. and acted slowly to light and the c showed blurring of the mar- at the temporal quadrant. ere was definite elevation in e center of the disc (redun- nt). Examination 18 days later vealed no measureable papill- ema, narrowing of the arteries thout any dilitation of the ins, and slight and weak ve- nous pulsation in both eyes. Visual acuity of the right eye was at the level of light perception and the left eye was still totally blind. The cause of blindness is postulated to the occlusion of the optic nerve artery resulting in anoxaemia of the optic nerve and papilledema.

Sarin, L. K., *J. Maine M.A.*, 51:48-49,1960.

Hemorrhagic Chickenpox: Two Fatalities

A boy of 13 had been treated with cortisone for tuberculous meningitis for the 3 weeks preceding onset of chickenpox. The rash spread rapidly and became extensively hemorrhagic, death occurring on the fourth day. A woman of 34, whose general condition had been satisfactory following radiotherapy for Hodgkin's disease 3 years earlier, became severely ill rapidly after onset of chickenpox, a hemorrhagic papular eruption covering the trunk and face and death occurring on the fourth day. It is suggested that the antibody response to the varicella virus had been modified in the boy by cortisone therapy and in the woman by neoplastic infiltration of lymphoid tissue.

Johnson, R. W. P., & Nelson, A. M., *Brit. M.J.*, 1:1183-1184,1960.

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Nasal Carriers of Staphylococci: Problem of Management

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Of 35 carriers not treated, t organisms disappeared in 5, pe sisted in 17, and recurred in 1 Of 4 managed by intranasal a plication of bacitracin ointme organisms disappeared in only Of 30 managed by intrana spraying of various antibiot suspended in sesame oil, orga isms disappeared in 4, persist in 10, and recurred in 16. Of managed by intranasal sprayi of neomycin in saline, organis persisted in 6 and recurred in Of 7 managed by systemic a ministration of antibiotics, orga isms disappeared in 1, persist in 2, and recurred in 4.

Although none of these met ods was very effective, local u of antibiotics seems preferable systemic. Whether the healt carrier is a major source of cli ical infections cannot be a swered at this time, but remov from the hospital of any carri disseminating a virulent stra responsible for clinical infectio is obligatory.

Martin, W. J., et al., *Proc. Staff Meet. M Clin.*, 35:282-292,1960.

eumatic Disease:
ophylaxis with a Combined
eparation of Penicillin,
lfonamides and
inopyrine

An oral combination containing 150,000 units benzathine penicillin G, 125 mg. sulfathiazole, 125 mg. sulfisoxazole and 150 mg. piperazine was given to 46 school children aged 11 to 14 whose reports indicated a recessed or current state of rheumatic disease, or suspected oropharyngeal infection. Treatment was for 16 months with a mid 4-month drug-free period. Dosage was three tablets given daily on four successive days per week. Joint pains were felt by 29 (63%) of the children at the beginning and only four at the end of treatment, while 42 (91.3%) had tonsillar infection before and only a few after treatment. Appropriate serologic tests were made in the cases of those given this treatment and in a control group of 40 children having had current rheumatic or tonsillar involvement. These values, above the limits for health in both groups, were restored to normal in the group treated but remained almost unchanged in the control group. The only side effects were a brief slight diarrhea in two children and slight nausea in one.

Meet. Med. rego, C., *Policlinico (sez. med.)*, 66:345-357,1959.

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Gout and Blood Dyscrasias

Although the mechanisms differ, a disturbance of uric acid metabolism that is similar to that observed in familial gout occurs in some blood dyscrasias, most commonly in polycythemia vera. In these patients, the increased uric acid follows increased formation and destruction of red and white blood cells and increased metabolism of nucleic acids in the blood-forming organs, with elaboration of intermediary products of purine metabolism. Such patients are susceptible to attacks of acute distress that are associated with inflammation of the distal joints of an extremity and respond to colchicine. The status of the red and white blood cells should be reviewed from time to time in patients with clinical gout, and clinical gout should be suspected in patients with blood dyscrasia who complain of joint pain.

Editorial, *J.A.M.A.*, 172:168,1960.

Serum Lipids and Coronary Disease

The association between increased concentration of serum cholesterol and increased susceptibility to coronary artery disease was recently reviewed and found to be only a statistical one of increasing likelihood of coronary artery disease with increasing concentration of serum cholesterol, of little help in pr dicting future coronary disea in any individual. Most patien developing overt coronary di ease have serum cholesterol co centrations in the range whic includes three-quarters of th normal population of middl aged men. The physician m decide to attempt to lower seru cholesterol only if it is very hig and if the patient has eviden of coronary artery disease.

Two as yet unproved assum tions are that:

1. The concentration of seru cholesterol can be permanen lowered.

2. Such lowering improves t patient's prognosis.

Evidence for the effectivene of a low-fat diet is based large on studies showing that races groups of persons consumi low-fat diets have lower seru cholesterol levels and a lower i cidence of coronary artery di ease. These peoples differ many other respects.

Attempts to evaluate the e fects of changes of diet on th course of existing coronary a tery disease have been aban doned. Short-term studies su gest that a low-fat diet lowe serum cholesterol, but it seem more likely that caloric balanc rather than dietary fat may b the factor determining choleste rol concentration. A study



1,928 published cases in the two years since TAO was released for general use show:

94.3% effectiveness in respiratory infections (617 cases including tonsillitis, staphylococcal and streptococcal pharyngitis, bronchitis, infectious asthma, bronchopneumonia, lobar pneumonia, bronchiectasis, lung abscess, otitis.) **You can count on TAO.**

92% effectiveness in skin and soft tissue infections (900 cases including pyoderma, impetigo, acne, infected skin disorders, wounds, incisions and burns, furunculosis, abscess, cellulitis, chronic ulcer, adenitis.) **You can count on TAO.**

87.1% effectiveness in genitourinary infections (349 cases including urethritis, cystitis, pyelitis, pyelonephritis, orchitis, pelvic inflammation, acute gonococcal urethritis, lymphogranuloma venereum.) **You can count on TAO.**

75.8% effectiveness in diverse infections (62 cases including fever of undetermined origin, peritoneal abscess, osteitis, periarthritis, septic arthritis, staphylococcal enterocolitis, gastroenteritis, carriers of staphylococci.) **You can count on TAO.**

95.6% of 1,928 cases free of side effects—in the remaining 4.4%, reactions were chiefly mild gastrointestinal disturbances which seldom necessitated discontinuance of therapy.

*In 884 of 1,928 cases the causative organisms were mostly staphylococci. The majority of clinical isolates were found to be resistant to at least one of the commonly used antibiotics and many patients had failed to respond to previous therapy with one or more antibiotics.

TAO proved 93.4% effective in these 884 cases.

Complete bibliography available on request.

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members of a religious group in this country who, because of their religious beliefs, subsist on a very low-fat diet (about 30 gm. a day) revealed serum cholesterol identical to that in persons of the same age in the population at large.

The few clinical studies that have been made on the effect of fat restriction on prognosis of patients who have had a coronary thrombosis have failed to separate the effects of fat restriction from those of caloric restriction.

The substitution of unsaturated vegetable oils for animal fats in the diet will lower the serum cholesterol for as long as this diet is followed, although one patient has been known to "relapse" to previous high levels after two years of doing well on corn oil. For such a regimen to be effective, the oil must be given in doses of 3 to 4 ounces a day, and animal fat kept below 30 gm. daily. Few patients are willing to adhere to this regimen for long. While less drastic measures may be effective in some cases, the patients with the highest cholesterol are the most resistant to treatment.

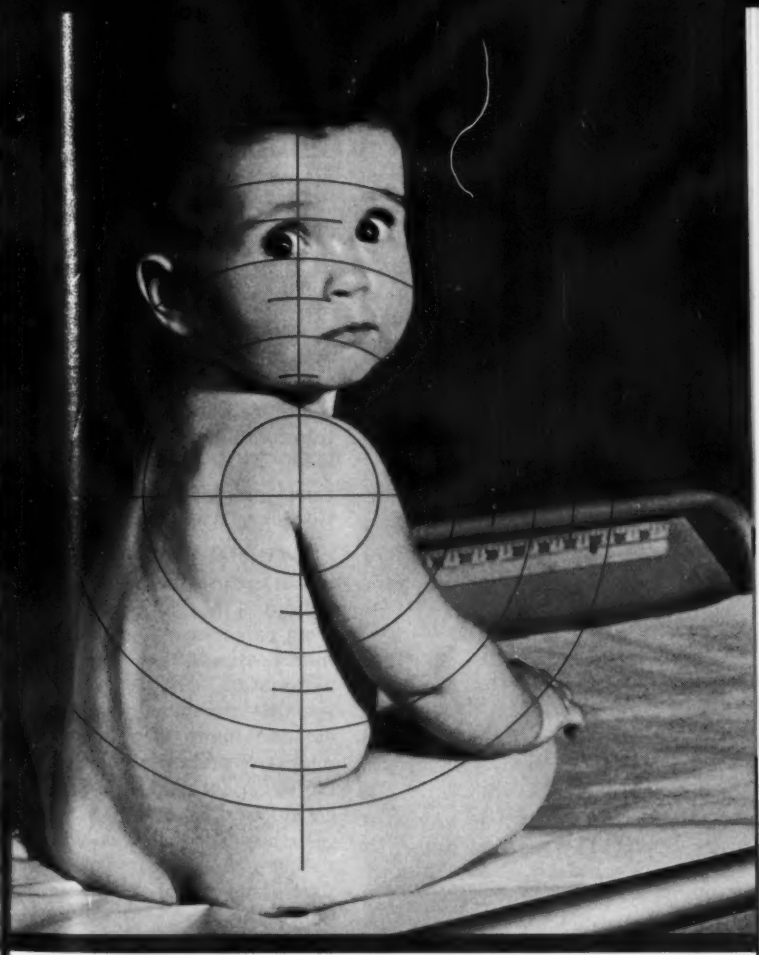
Nicotinic acid in large doses lowers the serum cholesterol but has unpleasant side effects. Large doses of thyroid hormone or its analogues will lower the serum cholesterol but at the r of causing symptoms of hyp thyroidism. Vegetable ste (sitosterol) have lowered c lesterol in some patients h have on the whole been dis pointing. Further long-ter study will be required before can be said that any of th agents has a permanent effect cholesterol concentration or the process of atherosclerosis

Albrink, M. J., *Connecticut Med.*, 24:2 1960.

Subacute Erosive Esophagit

Although this form of esop geal disease is commonly scribed as "reflux," "regu tant," or "peptic" in the bel that it is caused by surface co tact with acid-pepsin material r fluxed from the stomach, micr scopic evidence (reported in earlier paper) suggests that t inflammatory process begins the mucosa's tunica propria a the submucosa and that the ep thelial surface becomes involv only by upward extension of th inflammation. Further eviden that refluxing acid pepsin is n the cause was found in a revie of 200 cases, achlorhydria bein detected in 22 of these patien at the time the esophagitis w diagnosed. The achlorhydria w considered functional in 17 these 22, an anatomic basis bein found for the other 5.

Palmer, E. D., *New England J. Med.*, 262:9 929,1960.



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Sarcomatous Change in Brothers with Diaphysial Aclasis

Sarcomatous change is a rare but well recognized complication of diaphysial aclasis. The exostoses, varying in number up to 1000, appear at any time in childhood or adolescence, and continue to grow until bone growth ceases at about 20 years. After this they remain static unless malignant change occurs. By age 10, 90% of exotoses have been discovered. The unequal shortening of the long bones of the legs causes below average height and abnormalities of stance. In middle age severe osteoarthritic changes are frequent in the weight-bearing joints. Shortening of the distal end of the ulna with a tendency to dislocation of the wrist occurs in ⅓ of people so affected.

Chondrosarcomatous change should be suspected in any exotosis that shows renewed growth at any time after age 20. In many cases it is difficult to confirm the diagnosis without biopsy. Several x-ray films taken at intervals of a few months show an expanding radiolucent tumor with patchy secondary calcification, which lies between the bone and the periosteum, and may erode both these structures. Microscopically it is possible to find areas containing many atypical cartilage cells in which double nuclei are common, though mitotic figures are unusual.

In one family which has been observed, 3 affected brothers have died of bone sarcomas, but in only one of them was a biopsy available. Reports of 26 other cases of chondrosarcoma complicating diaphysial aclasis were found. In none of these families did more than one member show this complication.

Knight, J. D., *Brit. M.J.*, 1:1013-1015,1960.

Coccygodynia: Relief with Conservative Treatment

Preventing the repeated trauma of sitting not only gives the patient a period relatively free from pain but in some cases permits healing of pericoccygeal inflammation and relaxation of spastic muscles. A U-shaped cushion made of several thicknesses of adhesive foam-rubber moleskin is applied around the coccyx and part of the sacrum to distribute pressure away from the sensitive area. The curved part of the U can be placed well below the coccyx or reversed so as to fall high on the sacrum. Kept in place by its adhesive surface and by strips of adhesive tape if necessary, this is removed at bedtime and re-applied in the morning. Its use for 1 to 2 weeks in this way relieved coccygodynia in 8 of 12 patients.

Lieberman, W., *Am. J. Proctology*, 11:233-234, 1960.

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Bagnall, A. W. (Univ. British Columbia, Vancouver, B. C.): A.M.A. Clinical Meeting (Scientific Section, Exhibit No. 124), Minneapolis, Minnesota, Dec. 2-5, 1958.

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Scherbel, A. L.; Harrison, J. W., and Atdjian, Martin:* Cleveland Clin. Quart. *25:95, April, 1958.

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Cramer, Quentin (Kansas City):* Missouri Med. *55:1203, Nov., 1958.



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Disseminated Lupus Erythematosus: Report of a Case

A truck driver of 26 complained of coldness, blueness and stiffness of the fingers for 16 months, and of recurrent episodes of urticaria associated with stiffness of the joints for over a year. He was admitted with abdominal pain and vomiting, all investigations being negative except for leukopenia.

Clinical findings revealed a thin, prematurely aged male with a low-grade fever ranging from 99 to 100°. Intermittent rash on the face and body was urticarial with occasional vesicular and purpuric lesions. The skin of the extremities was blue and cold. There was axillary and inguinal lymphadenopathy, and the spleen was palpable on admission.

Laboratory findings showed scanty pus cells and epithelial cells in the urine. Hemoglobin was 87%, white cell count 2,200. Film showed normocytosis, and there was normochromia. No L.E. cells were found after numerous examinations. Although the Coombs test, cold agglutinations and latex fixation test were negative, the Wasserman and nuclear affinity tests were positive. Total serum protein was 7.56, albumin 2.2 gm./100 ml. Zinc sulfate turbidity was 14.5 units, thymol turbidity 8.9 units, and thymol flocculation 2 plus. Electrophoresis showed raised alpha$_2$, beta and gamma$_2$ components consistent with disseminated lupus erythematosus. Sternal marrow studies were normal. Histologic skin biopsy showed a small amount of melanin pigment and a very few chronic inflammatory cells around the capillaries of the superficial corium. Metachromatic staining for mast cells was negative. The dermal picture was not diagnostic since much of the pigmentation and cellular reaction could have been due to scratching.

Prednisone 10 mg. three times daily was given for three weeks without obvious improvement. ACTH gel, 30 mg. twice daily for 10 days, then 40 mg. twice daily for one day followed again by 30 mg. for two weeks, brought improvement. The patient is now maintained on 5 mg. prednisone three times daily.

This case is of interest because:

1. It presented as a chronic urticaria.

2. Many of the classical features of disseminated lupus erythematosus except L.E. cells were found on examination.

3. There was some response to steroid therapy, but it was extremely low.

Wilson, H. T. H., *Proc. Roy. Soc. Med.*, 52: 556,1959.

Improved Technique for Hernia Repair

Local anesthesia is used, because it is the safest and permits repair without tension on tissue. The patient can walk about immediately after operation, which gives him confidence in the repair and willingness to breath deeply and cough freely. The major difference in the technique involves transection of transversalis fascia from internal ring to pubic spine, bringing into view a fascial layer never described as being used in hernia repair. This layer is the under surface of the rectus sheath and/or transversalis fascia and conjointed tendon. There is usually a firm fascial border which can be used in forming the first and second layers of the repair. The lateral leaf of transversalis fascia in many extensive hernias is frayed, almost nonexistent. Opening the transversalis gives access to the femoral ring. A considerable number of so-called recurrent hernias are ascribable to overlooked femoral defects, and recurrences occur superior and lateral to the internal ring. By use of this method defects can be easily detected and repaired. In event of infection of the wound a wire suture does not have to be removed, and does not hinder or prolong drainage but gives support until granulation and fibrosis fill in after the infection. Wire is much more awkward to handle until one becomes experienced in its use, and care must be taken that it does not kink, for it may break at the site. Also, it can cut through tissue if drawn too tight.

Brisbane, J., *California Med.*, 92:342-344,1960.

Mechanical Intestinal Obstruction: Management

The greatest number of these are caused by strictures of the intestinal wall, by foreign bodies, by pressure from outside the intestinal wall, adhesions, hernias, volvulus, intussusception, developmental defects and interruption of the blood supply of the bowel as in embolus or thrombosis in the mesenteric vessels.

Some 68% of the gas in the intestine is swallowed air, while 32% forms within the intestinal tract. In simple mechanical obstruction of the small intestine fluid accumulation occurs, the first symptom being pain, then vomiting, followed by distention. There may be little to indicate a

serious condition, pulse rate, respiration, temperature and blood pressure being normal at first, but later the patient shows acute illness, dehydration, anxious expression, a feeble pulse, and clammy skin, with strangulation. The abdomen may be silent, feel doughy, tender without rigidity. Laboratory data are of little benefit.

A nasogastric tube with attached suction should be inserted before the patient is sent for x-ray studies. Usually the short tube controls vomiting and partially empties the upper gastrointestinal tract. The long tube is most useful when decompression of the bowel alone may relieve the obstruction, e.g., immediately postoperatively or with a ruptured appendix.

The diagnosis depends on history and findings by palpation and auscultation of the abdomen aided by simple x-ray. There are few, if any, accurate signs of impending strangulation necrosis, and for this reason the mortality rate remains high. More frequent use should be made of trocar decompression of the bowel, since there is an increasing incidence of obstruction due to adhesions secondary to a previous operative procedure. When nasogastric suction is not successful, it should not be prolonged to the risk of loss of viability of the involved bowel. In a series of 178 cases the mortality rate when resection of the bowel had to be done was four times that in those cases not requiring resection.

Todd, E., Jr., *J. Kentucky M.A.*, 57:917-92 1959.

Hernia and Gallbladder Surgery in Elderly Patients

Elderly persons in whom complications of external hernia and gallstones develop suffer an unnecessarily high mortality whereas patients having elective surgery do well even at advanced ages. The physician advising such patients about elective surgery must consider the potentially serious or even lethal complication that may develop in the next month or many years later. In completely asymptomatic gallstones one can justify postponement, but once symptoms occur surgery is indicated. The risk of operation in the uncomplicated case is minimal at any age, whereas that in the complicated case in the older age group is alarmingly great. The only time surgery should not be recommended for elderly persons is when they are suffering from some unrelated condition which is progressive and presumably will be fatal in the not distant future.

Ross, F. P., & Hickok, D. F., *New England J. Med.*, 262:501-505,1960.



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Pheochromocytoma in Childhood: Report of Case

A boy of 11 was hospitalized after having periodic headaches, blurred vision, vomiting, and hypertension for 2 years. Blood pressure was 230/185 mm. Hg, a 24-hour urine specimen contained 2400 mcg. of catecholamines, and a blood specimen showed a concentration of 30 mcg. of catecholamines per liter of plasma. Films revealed a round mass in the area of the right adrenal gland, and a tentative diagnosis of functioning pheochromocytoma was made.

After removal of the right adrenal gland, blood pressure fell to 108/62. One week later a 24-hour catecholamine determination was 150 mcg., still twice the normal value. The patient was hospitalized again 7 months later because high blood pressure had persisted, and a left adrenalectomy was performed. He was given 500 cc. of whole blood, and an infusion of 8 mcg. of arterenol in 500 cc. of 5% dextrose was started. After 2 intravenous injections of hydrocortisone sodium succinate, his blood pressure appeared to stabilize at 140/80. Oral cortisone, 25 mg. twice daily, was started on the third postoperative day, with 0.1 mg. of 9-alpha-fluorohydrocortisone daily added after 1 week. The patient was discharged 1 month postoperatively, still on co sone and 9-alpha-fluorohydro tisone medication. Although p phylactic treatment with adr olytic agents is apparently be ficial in such patients, it m cause development of multi tumors.

Zintel, H. A., et al., *Surgery*, 47:328-339,196

Malignant Disease in Aged: Incidence and Treatment

In 730 postmortem exami tions done over 16 years in home for the aged and infir 119 patients (16.3%) were fou to have had malignant disea Tumors of the gastrointestin tract were found in 49.6%, ge to-urinary tract in 16%, lungs 11.9%, and breast in 10.9 Diagnosis had been establish in ⅔ prior to death, although was early enough to perm treatment with some hope success in only ⅓. Princip early symptoms were weight lo in 44%, mass in 39%, anemia 35%, and pain in 20%. Trea ment consisted of surgical exc sion of the lesion in 23 patient intensive irradiation in 10, ch motherapy in 7, and fulguratio of the tumor in 2. The averag duration of life after treatme was 5.4 years, the best long-ter results being achieved in tho treated surgically. Early aggre sive therapy, even in patients advanced age, is clearly of valu

Elias, E., & Lesnick, G. J., *Am. J. M. Sc.*, 2 554-561,1960.

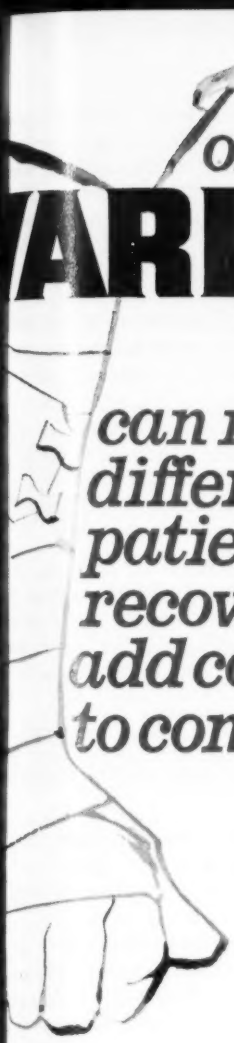
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Early Diagnosis of Slipped Upper Femoral Epiphysis

The obese Froelich-type child is most susceptible to this condition in the white race, the tall lean type with long extremities in the Negro. The majority of cases occur between ages 10 and 16. Although many studies have been unable to prove endocrine imbalance as the cause, some pituitary influence may be implicated. There is no evidence that vitamin or dietary deficiency is causative. Trauma, usually in the "acute slip," may be minimal.

Early symptoms are pain, limp, limitation of motion and deformity. Pain begins slowly and becomes worse on activity, being noted in the groin, front of thigh and inner aspect of the knee. Pain increases suddenly with a sudden and complete slip. Limitation of motion is most in abduction and internal rotation. Later in the process the hip is held externally rotated. Flexion is sharply limited, muscle spasm always marked. Shortening due to the coxa vara and external rotation with marked loss of flexion occur later. On attempting flexion the thigh swings into abduction and external rotation.

As soon as x-ray studies of the hip confirm diagnosis, weight-bearing should be prevented by complete bed rest for at least six months (even though bed rest does not always insure against further slipping or occurrence of the disease on the opposite side). The disease is not cured until the epiphyseal lines are fused, usually by age 16. Long fixation in spica casts is contraindicated for both physical and psychological reasons, because of which many operative procedures have been devised. Those best in different cases are:

1. Osteotomy of the neck with Moore pin fixation, later hip fusion.

2. Smith-Petersen nailing *in situ*.

3. Osteotomy of the neck of the femur of cuneiform type, resecting the anterior and superior overgrowth, head and neck, the opposing and pinning with Smith-Petersen nail.

4. Heavy traction for reduction for three days, followed by Smith-Petersen nailing for fixation.

5. Subtrochanteric osteotomy (anterio-lateral), fixed with Steinmann pin across osteotomy and spica cast.

6. Epiphyseodesis, Moore pin and osteotomy, later Heyman procedure. The aim of this procedure is to remove the bony block to flexion and abduction and rotation. It is used after slipping has reached a maximum.

Roberts, W. M., *The Recorder*, (Columbia S.C.), 23:17-20,1959.

eitis Deformans: Relief of n by Phenol Injection of Sympathetic Chain

Although pain is not uncom- n in osteitis deformans (Pag- disease of the bone), it is not stant. In some patients the gree of pain is agonizing. A man aged 46 demanded ampu- ion for relief of pain of osteitis formans of the right tibia. Dur- the preceding four years con- rvative treatment had given le relief. Amputation was con- ered too radical and she was n discharged. In a year she re- ned and amputation was done ove the knee. She returned o years later after having in- ed her left leg which resulted a chronic, painful ulcer. She tended as an outpatient for nservative treatment but sug- sted a second amputation as r pain was not relieved. In- eased vascularity of bone was nsidered possibly responsible the pain. The left lumbar mpathetic chain was therefore jected with novocaine, this af- ding complete temporary re- f. When pain recurred, 1:15 enol was injected around the mbar sympathetic chain and mplete relief of pain resulted th healing of the ulcer. This has lasted for eight years.

This method of treatment has been used in 16 cases of osteitis deformans presenting with severe pain. The diagnosis has been made clinically and radiologically. Results have been satisfactory except in four patients. In these four it was not possible to site the injection accurately because of extensive osteitis deformans of the spine.

The phenol solution must not be injected unless the operator is confident that the needle is accurately sited. He must be sure that the point is not in the subarachnoid space, in a blood vessel, or within the pleural sac.

No serious ill effects have been observed in using this method on over 1000 occasions in the treatment of peripheral ischemia. In less than 5% of all cases a painful numbness is experienced in the skin of the inguinal and adductor regions. The numbness may persist indefinitely but painful discomfort for more than six to eight weeks in any case is considered due to involvement of spinal nerve roots by the phenol. The incidence of numbness has been much less since these patients have been rotated forward immediately following injection.

Reid, W., *Scottish M.J.*, 5:71-75,1960.

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*sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate and sodium dioctyl sulfosuccinate.

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Urologic Cure of Hypertension

Underlying urologic disease as the cause of hypertension may exist in as many as 5% of all hypertensives, many curable urologic lesions which lead to hypertension remaining unrecognized clinically. While some of the newer antihypertensive drugs are extremely effective in relieving symptoms of hypertension, no drugs reverse the underlying causes. Urologic survey is mandatory when hypertension has its onset before age 20. In any hypertensive patient under 35 suspicion of unilateral renal disease should be entertained, particularly in case of rise in blood pressure above 140/90, of known onset within months, if this is accompanied by headache, retinal changes, or indications of generalized renal insufficiency. Such rapid progression is more indicative of unilateral than bilateral renal disease. Those who suddenly enter the malignant phase may have suffered sudden renal arterial or venous obstruction.

While other forms of surgery are employed to palliate hypertension, only those patients with curable urologic disease can be completely relieved of their hypertension through removal of the cause. In unilateral renal disease such as chronic atrophic pyelonephritis, early nephrectomy may reverse hypertension. Similarly nephrectomy is often indicated in tumor, vascular obstruction, hydronephrosis, aneurysm, fistula, and infarction. Surgical removal of functioning adrenal and paraganglion tumors also may provide complete relief.

Some patients with unilateral renal vascular disease may be cured by measures other than nephrectomy. Aneurysm of the renal artery may be resected, with resultant decrease in hypertension, and endarterectomy, arteriography, and embolectomy have been successfully accomplished. Fistulas may be repaired by vascular techniques.

Revascularization of the kidney by replacement of diseased or obstructed renal arteries appears to be rational therapy. Renal artery homografts have been utilized, and the use of arterial substitutes offers great possibilities. In addition, shunting procedures have been employed with some success in spleno-renal arterial anastomosis.

Because of the high incidence of hypertension caused by urologic disorders, and the availability of surgical methods of cure, physicians and surgeons alike must remain alert to the possibilities of underlying renal disease in every case of hypertension encountered.

Glenn, J. F., & Harvard, M., *Connecticut Med.*, 24:234-239,1960.

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references:

(1) Antos, R. J.: The Use of a New Dietary Product (Metrecal) For Weight Reduction, Southwestern Med. *40*:695-697 (Nov.) 1959. (2) Tullis, I. F.: Initial Experience with a Simple Weight Control Formula, to be published. (3) Roberts, H. J.: Effective Long-Term Weight Reduction—Experiences With Metrecal, to be published.

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Prolonged Corticosteroid Therapy in Chronic Asthma

Continuous treatment with prednisolone, 10 to 15 mg. daily, or triamcinolone, 6 to 12 mg. daily, was given to 14 patients to suppress symptoms of chronic asthma. Eight patients achieved sustained symptomatic improvement. Treatment has not become any less effective with passage of time, even in those who received prednisolone continuously for 2 or 3 years. Chronic bronchitis and recurrent respiratory infection were the factors probably responsible for the failure of the other 6 patients to obtain a sustained response.

Serious side effects occurred in 4 of the patients. Progress is being made in the management of 2 of the more important side effects (tuberculosis and osteoporosis). It is usually impossible to discover the presence of a peptic ulcer until the appearance of dyspepsia. Furthermore, it is unwise to continue oral corticosteroid treatment is such cases because of the danger of hematemesis or perforation.

There are some patients with chronic asthma in whom respiratory distress is so crippling that even if serious side effects were inevitable it might still be preferable to accept the consequences rather than to deny such patients the prospect of relief which corticosteroid therapy alone can offer.

The response to long term prednisolone therapy, whether given continuously or intermittently, is adversely influenced by chronic bronchitis and by frequent episodes of respiratory infections.

Patients in whom a marked improvement is not rapidly obtained after they have been given prednisolone in a dose of 20 mg. daily seldom benefit from long term treatment, whether continuous or intermittent.

Somer, A. R., et al., *Brit. M.J.*, 1:1092-1097, 1960.

Bisacodyl Rectally for Bowel Control in Bedridden Elderly Patients

From a double blind study on 100 patients it was concluded that suppositories containing bisacodyl (Dulcolax) are effective in producing normal bowel action in bedridden patients of a geriatric service, apparently acting directly on the mucosa of the colon. Good results were achieved with these suppositories in 79% of instances as compared to 29% with placebos. A 3-week trial in 12 patients given the suppositories every other day showed no decrease in effectiveness nor any evidence of toxicity. Average age of the patients was 73. All had required enemas regularly for some time.

Pincock, J. G., *Canad. M.A.J.*, 82:268-269, 1960.

Primary Varicella Pneumonia: Case Report

Sore throat and pain between the scapulas, followed within 12 hours by a profuse rash, developed in a father whose children were convalescing from chickenpox. When admitted on the third day for cough productive of blood-stained sputum, he had a widespread rash typical of chickenpox of 3 to 4 days' duration, was cyanosed, and had many vesicles in the mouth and pharynx. Temperature was 99.6°, pulse 96, respirations 22, blood pressure 145/90. Rhonchi were heard in all areas of the lungs, but no moist sounds nor signs of consolidation were detected. There was no clinical evidence of cardiovascular or neurologic involvement. Radiologic examination showed multiple small discrete opacities throughout both lung fields. Penicillin and streptomycin were given prophylactically and by the sixth day cough and cyanosis had disappeared and there were no abnormal signs on auscultation. Opacities were cleared a week later and he was fully recovered 21 days after admission.

The occurrence of primary varicella pneumonia, so far reported only in adults, reaffirms the desirability of contracting varicella during childhood.

Gordon, D., *Brit. M.J.*, 1:126-127,1960.

Risks of Smallpox Immunization

Over a period of five years there was only one case of smallpox notified in the age group 0-5 years, though there were between 2½ and 3 million unvaccinated small children. For many years babies have been vaccinated in order to reduce the incidence of complications if the procedure has to be repeated in later life. The assumption on which this teaching is based is that the safest age for primary vaccination is infancy. This is demonstrably false. It is probable that primary vaccination on school entry would insure a higher acceptance rate and a lower risk of complications. This might well be combined with revaccination of children leaving school to insure a high level of herd immunity, a goal not achievable with the present emphasis on infant vaccination.

Griffith, G. W., *Brit. M.J.*, 2:577-578,1959.

Congenital Goiter Due to Administration of Propylthiouracil During Pregnancy

A woman of 34 was delivered of a male infant after induction of labor by rupture of the membranes at the 38th week. Because of recurrence of hyperthyroidism, the mother was treated with propylthiouracil during the last four months of pregnancy. The original dose of 300 mg. daily was lowered to 250 mg. a day after a month. Lugol solution, 30 drops a day was also given. The newborn infant had palpable thickening in the region of the isthmus of the thyroid and both sides of the neck (somewhat more marked on the left) with minimal stridor during crying episodes. The skin of the face and the eyelids appeared to be somewhat puffy.

Roentgen examination of the neck in the lateral projection were typical, showing widening of the soft tissues around the trachea (particularly anteriorly) where there was a smooth indentation on the anterior aspect of the air canal. Examination of the bones showed no epiphyses of the long bones. The child was treated for hypothyroidism and improved rapidly.

The induction of hypothyroidism in the fetus as a result of administration of antithyroid drugs to the mother is well known, but this combination of circumstances is uncommon.

Wolf, B. S., *J. Mt. Sinai Hosp.*, 26:411, 1959.

Chiggers and Children

Patients seen because of discomfort from the attachment of chiggers may be divided into two groups:

1. Those who have numerous papules or vesicles over the body and the extremities.

2. Those who develop impetigo, cellulitis, adenitis, or bacteremia due to secondary infection.

3. Boys who develop marked local edema and redness of the prepuce or scrotum. Duration of itching or swelling in this group is 3 to 5 days unless secondary infection is present. Local treatment consists of cool wet compresses and either killing or removing the chigger.

An ointment (Caligesic) applied locally relieves itching in most cases and oral administration of antihistamines reduces itching in some. A repellant such as benzyl benzoate or diethyltoluamide should be applied if a susceptible person knows he is going to be exposed. Light applications of diethyltoluamide (in either aerosol or liquid form) to various openings of the clothing is recommended, or the compound may be applied directly to the skin.

Prince, G. E., *A.M.A. J. Dis. Child.*, 99:713, 1960.

multaneous Gastric and odenal Ulcers in a oy of 15

In childhood duodenal ulcer is frequent, gastric ulcer rare. o-existence of the two is very nusual. In a cited case a boy, e 15, completed a tackle while aying football in such a way at the heel of the ball carrier's oe was pressed into his abdo- en. He was knocked breathless nd experienced mild epigastric ain that lasted half an hour. wo days later, half an hour fter the evening meal, dull epi- astric pain developed and last- d one-half to one hour. The oy went to bed at his usual our and slept well, with no ore abdominal distress. The llowing day the school physi- an admitted him to the hospital nd requested barium studies.

Questioning revealed no sug- estive history. Examination was egative except that two stool xaminations on successive days howed a positive benzidine re- ction. The blood count was nor- nal. One urinalysis showed a race of albumin. Barium enema as normal. The barium meal howed a typical collar-button rater 1 cm. in diameter project- ng from the posterior aspect of he lesser curvature of the stom- ch 1 cm. above the incisura an- ularis. A long, shallow incisura ndented the opposite greater curvature. There was no irritability of the stomach and it was not tender on palpation. The duodenal cap never filled solidly nor well enough for satisfactory fluoroscopic demonstration, but one film showed a slitlike 5-ml. crater near its base surrounded by convergent mucosal folds. The boy continued asymptomatic and was discharged on ulcer management after seven days in the hospital.

Colangelo, C., *Illinois M.J.*, 116:214-215,1959.

Anemia of Prematurity: Iron Therapy

Parenteral iron given to 26 premature infants resulted in more rapid recovery from the early period of anemia than was attained by 22 prematures in a control group. Both groups showed rapid decreases in hemoglobin concentration, hematocrit and erythrocyte count during the first 2 months. The group given supplemental iron attained a concentration of hemoglobin significantly higher than the controls by the end of the third month. Premature infants resume hematopoiesis at age 6 weeks, and will benefit from iron supplements given after this time. The late anemia of prematurity is avoided if iron is given in the neonatal period. Diets superior in quality will also prevent late anemia.

Hammond, D., & Murphy, A., *Pediatrics*, 25: 362-374,1960.

Lifts depression.



You see an improvement within a few days
Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed — *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

rebral Complications
ring Pregnancy
d the Puerperium

Too frequently, minor symptms and signs referable to the ntral nervous system are not ven attention until more obous or serious signs appear. rebral infarctions occurring er may cause seizures, only en the nature of the original isode being recognized. Subachnoid hemorrhage and other tastrophic intracranial lesions cur during pregnancy and the erperium.

Study of 170 maternal deaths curring over a period of 10 ars indicated that:

1. Subarachnoid hemorrhage mands immediate neurosurgil attention.

2. Earlier diagnosis and surgil removal of intracerebral ood clots are of equal imporince.

3. Cerebral thrombosis may ll represent thrombosis of nous sinuses or even a retroade embolism from the pelvic ins via the paravertebral veins Batson.

4. Infection as a cause of cereal venous thrombosis is not to overlooked.

5. The use of anticoagulants for thrombophlebitis may result in spontaneous subdural hemorrhage remaining unrecognized until onset of coma.

6. Earlier recognition of clouding of the sensorium, mild hemiparesis and early papillary changes may prevent death.

In patients with intracranial tumor, the brain becomes edematous or in some way increased in volume during or immediately after pregnancy, more with meningiomas and acoustic neurofibromas than with tumors of glial origin. Hemorrhage in or around such a tumor may prove catastrophic, while onset of symptoms in the absence of hemorrhage may appear more gradually, requiring close and accurate observation. When recognized, appropriate neurosurgical attention must follow promptly in this group of cases. Pregnant and puerperal patients with tumors soon develop more cerebral edema and other complications than do the nonpregnant or nonpuerperal patients, suggesting the need for further studies on cerebral edema, cerebrovascular states and electrolytic balance in the obstetric and puerperal periods.

Barnes, J. L., & Abbott, K. H., *California Med.*, 91:237-244,1959.


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*Optimum results are obtained by gradually increasing the dosage to the maximum the patient can tolerate without the appearance of drowsiness. The following procedure for dosage adjustment has proven highly successful:
Take one tablet 2 times per day for 2 days. On the third day increase the daily dosage by one tablet. Similarly increase the dose every third day thereafter, to the point of drowsiness.
For example, if one tablet 4 times a day produces an obvious sleepy feeling, and on three the patient is comfortable, then the proper dose will be three tablets per day.

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(NOT A TRANQUILIZER)

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parative clinical studies show that PLEXONAL is superior eprobamate or barbiturates for daytime relaxation[1,2]

onal was preferred (superior therapeutic effect) by 73.7 ent of the patients, whereas 11.1 per cent preferred meprobamate, o of 6.6 to 1.... 30.5 per cent noted adverse reactions to obamate as compared to 7 per cent in respect to Plexonal.... nal gave better results than did any of the sedative or relaxing s that have been available during our experience covering revious 15 years."[1]

daytime relaxant, "it is well suited especially for the treatment perexcitability and anxiety."[2]

Indications: Anxiety, tension, apprehension, nervousness, irritability, restlessness, hyperexcitability. Extremely well tolerated by geriatric patients who need mild sedation, as well as by depressed patients.

Dosage: One tablet 3 or 4 times a day is adequate for most patients. However, some require up to six tablets per day, whereas others respond adequately to as little as 1 tablet per day.

Composition: Each tablet contains sodium diethylbarbiturate 45 mg., sodium phenylethylbarbiturate 15 mg., sodium isobutylallylbarbiturate 25 mg., scopolamine hydrobromide 0.08 mg., dihydroergotamine methanesulfonate 0.16 mg.

1. Scheifley, C. H.: Proc. Staff Meet. Mayo Clin. 34:408 (Aug. 19) 1959. 2. Kadish, A. H.: Clin. Med. 2:879 (March) 1955.

SANDOZ

Effect of Castor Oil, Soap Enema, and Hot Bath on the Pregnant Human Uterus Near Term

Sixty women between 38 and 41 weeks pregnant were divided in 4 groups of 15. Cases of cephalopelvic disproportion, malpresentation, antepartum hemorrhage, hydramnios, and those showing any sign of the onset of labor were excluded. Castor oil, a soap enema, and a hot bath were administered to each of the first group, only castor oil to those of the second, only a soap enema to those of the third, and only a hot bath to those of the fourth group. Changes in uterine activity in each case were assessed by use of the guard-ring tocodynamometer.

Results showed that administration of castor oil and soap enema increased contractile work done by the uterus by an average of 264%, while that of castor oil alone increased it by an average of 186% and of soap enema alone by an average of 95%. Hot bath alone had little effect on the contractile work done by the uterus. Castor oil and a soap enema may often expedite the spontaneous onset of labor or increase the effectiveness of other methods of induction such as artificial rupture of the membranes.

Mathie, J. G., & Dawson, B. H., *Brit. M.J.*, 1:1162,1959.

Hypnotic Suggestion in Labor

Five categories of patients are considered:

1. Those who are unhypnotizable.

2. Those who do not want to be hypnotized.

3. Those who achieve light or medium trance and have little proved benefit in labor though they may achieve benefit during pregnancy.

4. Those who achieve some relief in labor.

5. Those who have a pain-free labor.

The patient who is keen to use hypnosis and, when attempting this in labor, finds that it is of little or no benefit, may go through an emotional crisis which needs very careful handling (especially if extravagant claims have been made to her in advance). She may not only lose confidence in her doctor but also in herself.

A woman should be told early in her pregnancy whether or not hypnosis can be effectively used in her case. Anesthetic machines, drugs, and hypnosis all have a part to play in successful labor, a part that needs constant evaluation and revaluation in the light of current experience and statistics.

Chapple, P. A. L., *Brit. M.J.*, 1:1136-1137, 1960.

Breast Abscess

Of 100 consecutive cases of puerperal breast abscess requiring surgical treatment, all but two of the patients were delivered in the hospital. Ninety-nine of the babies were breast-fed initially, the remaining one being transferred to a surgical unit for the treatment of a congenital deformity. Twenty patients stopped breast-feeding while still in the hospital and a further 30 within five days of leaving. Sixty-four had given up breast-feeding before the breast became inflamed, and the remaining 36 stopped because of the inflammation. Of the 64 patients, 25 gave up breast feeding because of cracked nipples, 24 because of failure to lactate. Eighty-two of the patients received stilbestrol in varying dosage. It appeared that a high dosage of this agent was more effective than the same total dose spread over a longer period.

Breast abscess now appears to be more a protracted disease than it was prior to the advent of antibiotics. A thick fibrous wall forms around the abscess, this delaying resolution and preventing the cavity from collapsing after incision. Another clinical variety is a diffuse inflammation of the breast persisting for many days before any localization or pus formation is evident. In this type of lesion, more satisfactory results are obtained by withholding further antibiotics and applying local heat.

It has recently been estimated that 3 to 4% of all women delivered develop breast abscess requiring hospital treatment. The incidence of breast infections following hospital deliveries is more than double that following home confinements. An important factor is engorgement with milk, commonly from the stopping of breast-feeding without adequate measures being taken to suppress lactation and empty the breasts. For this reason breast-feeding should not be forced on unwilling mothers.

Knight, I. C. S., & Nolan, B., *Brit. M.J.*, 1: 1224-1226,1959.

Anesthesia in Obstetrics

For anesthesia in obstetrics, a combination of seconal, scopolamine and apomorphine appears to be the choice for premedication:

1. For psychic sedation and to determine the patient's sensitivity: ½ to 1½ grains of secobarbital sodium (Seconal), per os or per rectum, early in labor.

2. As labor progresses and hospital admission routine is completed: 1½ to 3 grains of secobarbital sodium per os or per rectum.

3. For amnesia and analgesia with progression of labor:



reduces postnasal drainage—lessens pharyngeal irritation
depresses the cough reflex—eases expulsion of mucus

*** The addition of the decongestant to the antitussive provides more complete cough control than regular "cough syrups." The central antitussive action of Dormethan[1] and the expectorant action of ammonium chloride are complemented by the decongestant action of Triaminic[2, 3, 4] which reduces swelling and controls irritating postnasal drip, a common cough stimulus.**

Triaminicol®

the decontussive cough syrup

Each tsp. (5 ml.) of fruit-flavored, non-alcoholic TRIAMINICOL provides:

Triaminic®	25 mg.
(phenylpropanolamine HCl	12.5 mg.
pheniramine maleate	6.25 mg.
pyrilamine maleate	6.25 mg.)
Dormethan (brand of dextromethorphan HBr)	15 mg.
Ammonium chloride	90 mg.

Dosage (to be administered every 3 or 4 hrs.): *Adults* — 2 tsp.; *Children 6 to 12* — 1 tsp.; *1 to 6* — ½ tsp.; under *1* — ¼ tsp. One dose at bedtime is usually sufficient to control the cough cycle initiated by postural drainage of paranasal sinuses.

References: 1. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 557. 2. Lhotka, F. M.: Illinois M. J. *112*:259 (Dec.) 1957. 3. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958. 4. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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a. Initial medication: 1/100 grain each of scopolamine H Br and apomorphine HCl intramuscularly, when the patient is making progress and contractions have become painful.

b. Second dose ¾ hour later: 1/150 grain of scopolamine H Br gr. 1/150 and 1/150 grain apomorphine HCl.

c. Subsequently, same dosage as *b* one hour after *b* and every two hours thereafter.

d. If signs of agitation appear, 1/100 to 1/50 grain of apomorphine is given at 15 minute intervals p.r.n.

Contraindications for this premedication regimen are:

1. Hypoxia due to hemorrhage, shock or respiratory obstruction (as pulmonary edema with preeclamptic toxemias).
2. Heart disease with decompensation or imminent failure, obvious arrhythmias or abnormal tachycardia.
3. Esophageal lesions.
4. Premature labor.

This regimen is applicable to all but a few complicated cases, the precautions named being taken, and any complications being properly dealt with promptly.

For routine, uncomplicated deliveries, a conduction block (as a spinal "saddle block" or peridural block) is preferred. With the need for an unconscious patient nitrous oxide, cyclopropane, or ether is indicated, depending upon other complicating factors. In complications of associated diseases the agent of choice must be selected with good judgment and careful consideration.

Newcomb, A. D., & Hitchcock, P., *Missouri Med.*, 57:719-726,1960.

Carcinoma of the Uterine Cervix: Early Diagnosis

Colposcopy, Papanicolaou's cytological method, and colpomicroscopy were used in addition to speculum examination in 230 patients with carcinoma of the uterine cervix, diagnosis being confirmed by histologic examination in all. Seventy-four had preinvasive, 128 stage-1 and 28 stage-2 carcinoma. In 55 gross appearance of the cervix was normal, but colposcopy with cytologic examination and colpomicroscopy revealed preinvasive carcinoma in 34 and stage-1 carcinoma in 21 patients. No difference between the 3 techniques was appreciable regarding percentage of false-negative diagnoses, but doubtful results were considerably more frequent with colposcopy than with either of the other techniques. These diagnostic measures should be used in combination for reliable exclusion of carcinoma in this organ.

Brandl, K., & Kofler, E., *Geburtsh. u. Frauenh.*, 19:415-420,1959.



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BOUNCE back fast with TYLENOL®

she's flying high now... her temperature and discomfort brought under control quickly with Tylenol®

TYLENOL® (acetaminophen) an effective pediatric antipyretic and analgesic[1]
remarkably free from toxicity[2]
well accepted, well tolerated by children[1]

TYLENOL ELIXIR—120 mg. (2 gr.) per 5 cc.; 4 and 12 fl. oz. bottles.
TYLENOL DROPS—60 mg. (1 gr.) per 0.6 cc.; 15 cc. bottles with calibrated droppers.

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1. Cornely, D. A., and Ritter, J. A.: N-acetyl-p-aminophenol (Tylenol Elixir) as a Pediatric Antipyretic-Analgesic. J.A.M.A. 166:1219 (Apr. 7) 1956
2. Mintz, A. A.: Management of the Febrile Child, J. Ky. Acad. Gen. Pract. 5:28 (Jan.) 1959.

ncidence of Complications fter Prostatectomy

Among 100 unselected cases, Wilson Hey prostatectomy was arried out in 65, retropubic rostatectomy in three, and cold-unch resection (perurethral) in 2. Retropubic, Wilson Hey, and erurethral prostatectomy were erformed according to the size f the prostate and other indica-ons. The type of operation ap-arently made no essential dif-erence to the incidence of post-urgical complications.

Incontinence, a cause of much istress and anxiety, was not ermanent in any of the cases. A stricture ½ inch from the ex-ernal urinary meatus occurred n 20% of patients irrespective f type of prostatectomy. A la-ex two-way catheter was insert-d in almost every instance with marked drop of incidence of his complication.

Thirty-three had urinary in-ection before prostatectomy. In he first four weeks after opera-on 83 were found to be infected espite use of the closed-drain-e system. Additional precau-ons included the enclosure of he penis and extremity of the atheter in a sterile chamber rmed by a roll of cellophane se-ured above and below by sleek strapping. The catheter is usually removed on the fourth postoperative day. The routine administration of antibiotics immediately after the operation did not seem to influence the tendency to infection. Postoperative infection did not seem to diminish despite elimination of the various factors to which it has been attributed, reaching its peak during the first four weeks (while epithelization was taking place).

There was no case of incisional hernia, this result attributable to the routine use of a transverse suprapubic incision. In 27% a suprapubic leak developed, healing after a few days' catheter drainage. In only one patient was it necessary to excise and resuture the wound. To prevent this complication in the Hey operation the bladder wall should be sutured with three rows of continuous suture. In the retropubic operation, the prostatic capsule should be sutured with two rows of sutures using an eyeless needle on No. 1 20-day catgut.

Postoperative infection, especially with E. coli and Pr. vulgaris, continues to be the most obstinate problem. Back-pressure and hydronephrosis before

operation may also be complicating factors.

Ross, J. C., & Tinckler, L. F., *Brit. M.J.*, 2: 663-666,1959.

Carcinoma of the Prostate: Current Status

Some highlights from a survey of recent reports:

1. Prostatic cancer, developing in about 5% of men reaching age 60, accounts for approximately 10% of hospitalizations for cancer among men.

2. Benign hyperplasia and cancer are coexistent in about 75% of cases, cancer being found in about 20% of cases of prostatic obstruction.

3. The posterior lobe is the site of origin of 85% of cancers of the prostate, whereas hypertrophy associated with aging is usually localized in the lateral and middle lobes.

4. Early diagnosis requires frequent rectal examinations and is the responsibility of the general practitioner.

5. For early lesions, treatment by radical perineal prostatectomy has a 5-year survival rate of about 50%, radical retropubic prostatectomy giving equally good results.

6. In advanced cases unsuitable for radical surgery, a remission of symptoms usually follows orchiectomy and estrogen therapy, cortisone being valuable in management when these measures are no longer effective.

Newman, H. R., *Connecticut Med.*, 24:3 356,1960.

Urinary Calculous Disease

About 50% of the calculi a renal, 16% ureteral, 30% in t bladder, 3% urethral and 1 prostatic. Symptoms are varie and may include gastrointestin disturbances, chills, fever, a bladder irritation. The treatme depends upon many factors su as type of stone, infection, o struction, degree of renal da age, and metabolic defects. Sm stones may be passed spontan ously, but larger ones (causi obstruction or associated with i fection and sepsis) must be r moved surgically. In the uret ra, incisions should be ma through the scrotum or in t scrotal perineal area with an grade removal of the calcul since incisions in the pendulo urethra have a great tenden toward fistula formation. Aids preventing recurrence inclu adequate fluid intake, relief any obstruction, careful chem therapeutic and antimicrob therapy to eliminate infecti administration of an antacid g (Amphogel or Basaljel) to r tard absorption of phosphat and alkalinization or acidificati of the urine (depending on ty of stone present).

Bohne, A. W., *Northwest Med.*, 59:615-6 1960.

octors and the Law

CHARLES J. FRANKEL, M.D., L.L.B., *Editor*

s hospitalization insurer liable benefits, under policy excluding ments where admission to hospi- is for diagnostic purposes, if ma- portion of hospitalized period is oted to diagnostic work?◀

This question was passed on the Pennsylvania Superior urt in *Simon* vs *Hospital Serv- Association of Pittsburgh,* A.(2d) 52 (1960). After be- confined to bed for three ys because of acute abdominal in, plaintiff, at her doctor's in- tence, entered hospital. Dur- 13 days in hospital plaintiff ceived treatment consisting of d rest, special diet, analgesics, rbiturates, enemas, Nuper- inal ointments, saline douche, plication of hot water bottles, addition to electrocardiogram, lecystegram and X-rays of rious types. Plaintiff recovered m her illness but it was never gnosed.

Defendant insurer contended was not liable because policy vering plaintiff expressly ex- ded payment of benefits if pa- tient is admitted to hospital for "diagnosis or for laboratory or x-ray studies solely for diagnosis purposes." The Court said that diagnosis is defined as "the art or act of recognizing the presence of disease from its symptoms and deciding as to its character." Diagnosis is often a continuing part of doctor's management of an ill person's case and defendant is not relieved from liability because extensive effort is made to diagnose patient's ailment while he is in hospital in need of treatment and care. Plaintiff was hospitalized because she was confined to bed by acute abdominal pain which was not responding to treatment and she therefore needed treatment and care. She was not an ambulatory patient admitted for what is termed in laymen's language "a check-up." Since most hospital patients require diagnostic tests along with therapeutic treatment, the exception in the policy must relate to patients admitted only for diagnosis as distinguished from

therapeutic treatment and care. Insurer contended treatment was merely incidental to efforts made to diagnose plaintiff's illness and that periods of hospitalization where major portion thereof is made up of diagnostic work are not covered. The Court said that liability under the policy does not depend on the comparative times given to diagnosis and to treatment. The time of taking an x-ray is not to be measured against the time involved in taking a pill.

►*In an action to set aside that part of divorce decree requiring support by husband of child born during existence of marriage, on ground he was not father of child, may doctor, who attended wife and delivered child, testify as to entries in his records and those of hospital? Is hospital's "Newborn Record" sheet on the child admissable?*◄

These questions were passed on by the St. Louis, Missouri Court of Appeals in 1960 (F— vs F—, 333 S.W.(2d) 320). The marriage between plaintiff and defendant, which was marked by frequent separations, had been terminated by divorce. In the present action, plaintiff sought to have set aside that part of divorce decree which required him to support a child born while the marriage existed on the ground he was not the father. Plaintiff contended that defendant, upon discoverin while they were separated th she was pregnant by anothe man, induced him to live wit her by stating she wanted a re conciliation. The reconciliatio lasted only a short time. Th child was born 229 days after th first day they were reconcile

Plaintiff sought to prove h contention by testimony of do tor who attended defendant an delivered child as to entries i his records, made when plaintif first consulted him, regardin her last menstrual period, an his entry on the hospital recor that parturition had been ful term. Defendant contended th evidence was inadmissible be cause obtained in the course o a privileged communication. Th Court said that a doctor is pro vented, by statute, from testify ing, over patient's objection, t any information acquired whil attending the patient, if such in formation was necessary to en able him to prescribe for or trea the patient. The privilege ex tends to information gained b the doctor through his observa tion, inspection, examination and treatment of the patient. I the absence of evidence to th contrary, it is assumed that in formation given doctor by pa tient was necessary to assist hi in treating patient. The informa tion here in question was privi leged, and therefore inadmiss

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ble, because it was given while the doctor-patient relation existed and was necessary to enable doctor to treat patient.

Plaintiff offered, in further support of his position, the hospital's "Newborn Record" sheet in the child signed by defendant's doctor after the delivery. The record stated the baby was apparently normal, weighed 8½ pounds and was 19½ inches long; plaintiff argued that such a baby could not have been born after a gestation period of only 229 days. He contended the record was not privileged because it was not necessary to enable doctor to treat his patient, the mother. The Court said the question was a close one, but since the record was not determinative, under its view of the case, it would consider it for whatever weight it might have. Children born in wedlock are presumed to be legitimate and the presumption can be rebutted only by clear and convincing evidence; such evidence is not present here. The Court said there was no medical evidence that a gestation period of 229 days is a medical impossibility, and, although it is obviously shorter than the normal period of 280 days, it could not judicially say it was so extraordinarily divergent as to be medically impossible.

►*Is a doctor liable in damages if, while performing authorized appendectomy, he also removed patient's reproductive organs because it was, under the circumstances, good surgical practice to do so? Does the fact that patient had signed general consent form constitute defense for doctor?*◄

The Court of Appeal, Second Circuit, of Louisiana passed on these questions in *Rogers* vs *Lumbermens Mutual Casualty Company*, 119 So.(2d) 649 (1960). Defendant doctor operated on plaintiff and performed a total hysterectomy, a bilateral salpingo-oopheroctomy and an appendectomy. Plaintiff contended she had authorized only the appendectomy and was ignorant of any possibility of an operation for the removal of her reproductive organs. The Court said the evidence supported her contention she had consented to only the appendectomy; the evidence is corroborated by the fact that her consultations with and treatment by defendant, during a period of several years, were primarily motivated by her continuing and persistent determination to overcome her sterile condition. The universally recognized rule, said the Court, is that a patient's consent is a prerequisite to a surgical operation. A doctor who performs an operation without his patient's consent, express or implied, or the



"I wouldn't be [illegible]ooting all night if I w[illegible]re able to get my bea[illegible] on some **TRIAMINIC®** to clear up m[illegible] stuffed sinuse[illegible]."

...and for humans with STUFFED-UP SINUSES...

Your patient with sinus congestion doesn't give a h[illegible] about anything but prompt relief. And TRIAMIN[illegible] has a pharmacologically balanced formula designe[illegible] give him just that. As soon as he swallows the ta[illegible] the medication is transported *systemically* to *all* n[illegible] and paranasal membranes—reaching inaccess[illegible] sinus cavities where drops and sprays can never p[illegible] trate. TRIAMINIC thereby brings more complete, m[illegible] effective relief without hazards of topical ther[illegible] such as ciliary inhibition, rebound congestion, [illegible] "nose drop addiction."

Indications: **nasal and paranasal congestion, si[illegible] itis, postnasal drip, upper respiratory allergy.**

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Each Triaminic timed-release Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Dosage: **1 tablet in the morning, midafternoon and at b[illegible] In postnasal drip, 1 tablet at bedtime is usually sufficient.**

Each timed-release Triaminic Juvelet® provides:
¼ the formulation of the Triaminic Tablet.
Dosage: **1 Juvelet in the morning, midafternoon and at b[illegible]**

Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage **(to be administered every 3 or 4 hours):**
Adults **—1 or 2 tsp.;** ***Children 6 to 12*** **—1 tsp.;**
Children 1 to 6 **— ½ tsp.;** ***Children under 1*** **— ¼ tsp.**

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timed-release tablets, juvelets, and syrup

STOP *running noses* *and open stuffed noses orally*

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consent of some authorized person, is guilty of an assault and battery for which he is liable in damages.

Defendant contended his removal of patient's reproductive organs was good surgical procedure, under the circumstances that existed, and that he was, therefore, not liable. The Court said that there was an exception to the general rule where there is an emergency requiring immediate action for the preservation of the patient's life or health when it is impossible or impracticable to get the consent of the patient or of anyone authorized to assume the responsibility. Here, there was no immediate threat to the patient's life or health; defendant removed her reproductive organs merely as a precautionary measure. Thus, defendant is liable even though he acted in accordance with good surgical procedure.

Defendant further contended that patient's signing of consent form constituted consent to removal of her reproductive organs. The form was as follows: "I hereby authorize the physician or physicians in charge to administer such treatment and the surgeon to have administered such anesthetics as found necessary to perform this operation which is advisable in the treatment of this patient." The Court said the authorization was so ambiguous as to be completely worthless and constituted no defense.

►*Is private charitable hospital liable for injuries caused by negligence of employee in performing a medical act?*◄

The New York Court of Appeals had this question before it in *Bing* vs *Thunig*, 143 N.E.(2d) 3 (1957). In preparing plaintiff for operation for correction of a fissure of the anus, nurses employed by defendant hospital applied tincture of zephiran to operative area. The surgeon came to the operating room some 15 minutes later and, after completing the preoperative draping, he took a heated electric cautery and touched it to the fissure to mark it before beginning the actual searing of the tissue. There was a smell of very hot singed linen. The surgeon doused the area with water and, when he was sure the fire was out, proceeded with the operation. Subsequent examination revealed severe burns on the plaintiff's body and when the linen was inspected it was found that several holes had burned through the sheet under her. The Court said the evidence supported a finding that some of the inflammable zephiran solution had dropped on the sheet under plaintiff leaving a stain discoverable on inspection, that the

nurses had had full opportunity prior to the operation to remove the stained linen and that the solution which had dropped on the sheet had given off a gaseous vapor which ignited upon contact with the heated cautery. The nurses' failure to remove the contaminated linen was clearly negligent.

Defendant hospital contended it could not be held liable under the doctrine of *respondeat superior* because the negligence occurred during performance of a "medical" act. The Court said the distinction between "medical" and "administrative" acts of hospital employees has never been clearly defined. For example, it has been held that giving a transfusion to the wrong patient is administrative while administering the wrong blood to the right patient is medical. It has also been held that making an injection with improperly sterilized hypodermic needle is administrative while improperly administering an injection is medical. The distinction was the result of a judicial compromise between the doctrines of *respondeat superior* and total immunity for charitable institutions.

The Court further said that the reasons advanced for granting charitable hospitals immunity from liability for negligence were insubstantial. The first reason, namely, that one who accepts charity must be deemed to have waived any right to damages for injuries caused by negligence of his benefactor's employees has long been abandoned as logically weak and a fiction. The second ground, that professional personnel, although salaried employees, should be deemed independent contractors, is inconsistent with regarding them as employees in all other contexts. Further, the idea that a hospital does not undertake to treat patients through its doctors and nurses, but instead undertakes to procure them to act upon their own responsibility, no longer reflects the facts. Present-day hospitals do far more than furnish facilities for treatment. They employ on a salaried basis a large staff of doctors, nurses and interns as well as administrative and manual workers, and charge patients for care and treatment, collecting for such services, if necessary, through legal action. Certainly, one availing himself of "hospital facilities" expects that the hospital will attempt to cure him, not that its nurses or other employees will act on their own responsibility. Nor, said the Court, may the exemption be justified by the fear that the imposition of liability will do irreparable harm to the charitable hospital. When the rule originated in the middle of the nine-

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teenth century, there was not only the possibility that a substantial award in one negligence suit might destroy the hospital, but concern was felt that permitting recovery against charitable hospitals might cause them, in self-protection, to limit their activities. Such dangers are now less acute. Insurance to protect against possible claims and lawsuits is now available and hospitals in jurisdictions imposing liability have suffered no undue hardships. Today's hospital is quite different from its predecessor of long ago; it receives wide community support, employs many people and necessarily operates in businesslike fashion. There is no reason to continue hospitals' exemption rule of *respondeat superior;* their liability must be governed by same principles that apply to all other employers.

►*Is expert testimony necessary to establish that doctor was negligent when, during postoperative treatment after rhinoplasty, he allegedly cleaned out patient's nose with caustic solution, rather than 10% cocaine solution normally used?*◄

This question was before the Superior Court, Appellate division, of New Jersey in *Becker* vs *Eisenstodt,* 158 A.(2d) 706 (1960). Several days after defendant doctor performed rhinoplasty on her, plaintiff went to his office for postoperative treatment. Defendant, after dipping pledget of cotton in one of the bottles sitting on nearby tray pushed pledget all the way up plaintiff's right nostril. Despite plaintiff's complaints of pain, defendant did not then remove the pledget. During time pledget was in plaintiff's nose a silvery liquid ran down her nostril and wet her upper lip. When defendant did remove the pledget, he replaced plaintiff's bandages and told her to return the next day. When the bandages were removed the next day, plaintiff's nose and upper lip were swollen, the flesh raw and skin coming off. Defendant treated the condition for two months with salve. By that time plaintiff's right nostril had contracted so that it was almost completely closed; defendant terminated the doctor-patient relation when plaintiff cried because of pain caused by procedure used to try to remedy this condition. Pictures taken shortly thereafter showed the right nostril almost closed, a vertical scar running from the nostril to the right upper lip, and the edge of the lip drawn upward where the lip met it; the lip's appearance approximated that of a harelip.

Defendant testified pledget had been dipped in 10% cocaine solution. An expert witness testified for plaintiff that her burns were apparently caused by

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caustic and that a 10% cocaine solution could not reasonably have produced the condition he saw a few days after pledget was inserted in plaintiff's nose. Another expert witness testifying for plaintiff stated her burns could not have been caused by 10% cocaine solution. He said that he could not say what caused the burn but that it could have been caused by a hot object or by a caustic or acid. The Court said the testimony of the two experts established a medical error on which a layman is competent to pass judgment and conclude from common experience that such things do not happen if proper care and skill have been used; in such a situation no expert testimony is needed to establish a departure from ordinary standards of care. In the absence of satisfactory explanation by defendant, jury could properly find defendant guilty of malpractice.◀

Ingestion of Lye Treated with Prednisone and Antibiotics

Lye is the fifth leading cause of poisoning among those under 19 years, and is an important problem in the one to four age group. After the lye is swallowed the swelling of the esophagus interferes with swallowing, this being followed by a period of normal swallowing until scar tissue contraction closes the esophagus. Until recently, treatment consisted of surgery or the mechanical opening of the esophagus, both of which produce generally unsatisfactory results.

The serious consequences of swallowing lye may be prevented by the use of prednisone and an antibiotic. Of 13 children treated with daily oral doses of prednisone and tetracycline none experienced stricture. Although tubes were used for the first three days, it is possible that less irritation would have been produced from swallowing clear liquids than from the continued irritation of the nasogastric tube. All of the children tolerated a soft diet after the third day, this being continued for three weeks until a general diet could be given. None showed any narrowing of the esophagus after three months to 3½ years post-treatment.

Miller, C. L., & Warren, R. O. Y., *J.A.M.A.* 170:1525,1959.

The Doctor Builds His Estate

Prepared monthly by the Research Department of Bache & Co., 36 Wall Street, New York 5.

These monthly articles point out the method by which the physician may overcome the handicap imposed upon him by taxes on the bulk of his income at normal rates, as opposed to the capital gains tax open to many business men. One solution is systematic investment of current income in securities.◀

The shares of major movie companies have been perking up of late in the securities markets despite the fact that average movie attendance continues to decline. Why the sudden interest in this apparently unpromising situation?

For one thing, one of the prime attractions of these stocks has always been their hidden asset values. These are in the form of film libraries carried on the books at nominal values, since their costs were amortized over the period since the initial release of the pictures. Only a handful of films made by major producing studios since 1948 have appeared on television because the studios had not solved the question of distribution of proceeds of any sale to TV. This was one of the key issues in the recent strike by the writers and actors, a strike that was settled with the studios retaining the profits from any sales made to TV of films made between 1948 and 1960.

Now that management is free to make deals for sellout of the post-48's, several producers have already started negotiating with Warner Bros. already having completed transfer of 110 films for $10 million and Columbia Pictures contemplating the release of a portion of their backlog sometime in the near future. Eventually, we expect all film libraries to find their way to television although some of the producers may hold out to await bigger profits from Pay-TV when it gets under way. The amount of cash to be realized from such a sellout is difficult to forecast, since revenues could come in the

form of rental fees as well as cash from a complete sellout. It is safe to say, however, that cash return to the companies should be in excess of that realized on the sales to TV of the pre-1948 film libraries.

A second plus factor for the movie makers has been the public's acceptance of the superspectacular "blockbuster" pictures. Five or six years ago a $5 million budget for a motion picture was a fantastic thing. Nowadays, there are spectaculars being produced for $10 million-and-up. While this kind of spending might appear to border on the reckless, movie men claim they are really reducing their risks by pouring vast sums into single productions. They claim that by buying the best possible stories and hiring the biggest stars they are not only insuring their investments but ushering their product into a new kind of market, that of the two and three a day showing with advanced ticket sales as opposed to the "grind" type continuous showing plan. Industry observers are finding that while people aren't going to the movies as often as they used to, when there is a lavish, spectacular feature, they go in droves and they are willing to pay top prices. This development has helped the producers gain a more predictable and safer profit picture since t results of the "bloc kbuste made to date bear ou the p ducers' contentions.

Diversification is a third ite that has proved of so e imp tance in bringing the movie ma ers out of an earnings mora Some companies are produci films for television. Almost are now producing their o musical records and many a have music publishing depa ments. There has been a mo toward industrial and educatio al films, toward ownership of T and radio stations, and towa electronic projects.

Thus, the movie industry mu be visualized as lying betwe its heyday of the 1930s and t future, in which Pay-Televisi must loom greatly. With earnin beginning to trend upward and more enlightened manageme taking over from the old guard the 20's and 30's, many of t stocks in this group are attra tive speculative investments.

We have chosen three co panies which have shown go earnings power and which ha currently been more successf in producing and marketing fil than any of their competitor The three are Decca Recor (through Universal Pictures United Artists and Metro-Gol wyn-Mayer.



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Decca Records

The shares of Decca Records are an attractive speculation based on its 87% ownership interest in Universal Pictures, which is now enjoying a revitalization of earnings with their pockets bulging from several hit box office successes. Behind each Decca share in the hands of the public, there is approximately six-tenths of a share of Universal common and Decca, which owns close to 90% of Universal, consolidates earnings in its reports.

In the first quarter of 1960, Decca's earnings totaled $1.55 per share, about 10 times those a year earlier, largely reflecting Universal's present "hit" pictures. Prospects are good for earnings of $4.50 this year, up from $1.81 last year, and there is potential for further earnings gains in 1961 resting on Universal's biggest blockbuster "Spartacus," into which the company has sunk $12 million. The company also has another $12 million super, "Montezuma," in the works.

Total revenues in 1960 should exceed those of the preceding year by a comfortable margin. Universal Pictures' contribution is likely to be much greater, reflecting the box office success of "Pillow Talk," "Operation Petticoat" and "Imitation of Life." "Imitation" is expected to gross around $6 million domestically while "Pillow Talk" revenues could reach $7.3 million.

The opening of Universal's production of "Spartacus" has been set for October 6 at the DeMille Theatre in New York. The theatre has guaranteed a $1 million advance before the opening and a minimum run of two years with Universal having the option of extending the run.

Universal also derives revenues from two sources other than production of motion pictures. The company has a contract with Columbia Pictures' Screen Gems Subsidiary to release its pre-1950 pictures to television. An annual minimum income is guaranteed to Universal of $2 million in the first year, which was included in 1957-58 revenues and $3 million for each of the next six years. Thus, $3 million will be included in this year's results.

The third source of the company's earnings is United World Films, the company's fully owned subsidiary. This company rents 16 mm. movies which are generally 18 months of age and older to non-theatrical theatres. This includes such things as home movies, clubs, fraternal organizations and schools, etc. In addition, United World Films owns the Gold Library of Capital Films. They also do some filming work for the Government, but

DECCA RECORDS

Price	31½
Divide d	$1.00
Yield	3.2%
Trade(	N.Y.S.E.

Capitalization	
Long Term Debt (of Universal Pictures)	$7,618,993
Preferred Stock (of Universal Pictures)	$4,158,000
Minority Interest (other than preferred stock)	$3,671,427
Common Stock ($0.50 par), excluding 241,700 shares owned by Universal Pictures	1,285,701

his is of minor importance in its otal sales. United World Films ccounts for approximately 5% f Universal's gross sales. Since here are no production costs in onnection with their activities nd the only expenses in conection with the operations are dministrative and overhead, evenues on this end of the busiess are thought to be higher han on movie production.

At the start of 1958, Universal ad a large number of inexpenve grade B motion pictures in s film library. This was at a me when the trend in public aste changed form inexpensive nd moderately expensive produced pictures to more elaborate nd expensive films based on ell-known literary or dramatic roperties with star casts. Thus, n order to re-evaluate the comany's activities, the studio was losed temporarily to re-examine roduction and distribution poliies. During this period, the company made drastic changes in its operations and operating policy. First, it embarked on a policy of participation productions with independent companies, formed by producers, actors, directors and other creative talent.

Secondly, the company sold its studio properties to MCA, Inc., for $11,250,000 and leased them back for a 10-year period at a minimum annual rental of $1 million. Formerly, overhead cost on this property ran roughly $4 to $5 million per year and thus, the company had to have a considerable number of successes just to cover their operating expenses. Third, domestic and international distribution organizations were streamlined by consolidating branch offices and setting up sub-branches. In domestic distribution alone, a 21% reduction in overhead was accomplished. As a result of these efficiencies, the company was able to restore dividends and put

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perations on a profitable basis. Aside from Universal Pictures, Decca is one of the leading manufacturers of phonograph records. The company manufactures phonograph records of all commercial speeds, with output principally of popular music, folk songs and semi-classical or show tunes. It also produces classical records in a Gold Label series and sells phonographs and accessories manufactured for it by others. In 1959, 310 albums in both stereophonic and monaural versions were released under the company's Decca, Coral, Brunswick, and Vocalion labels. Manufacturing is in leased plants in Pinckneyville, Illinois, Glosterville, New York, and an owned unit in Lachine, Quebec.

United Artists

The second stock to be examined in our series is United Artists. The company is a leading distributor of independently-produced motion pictures and became a major producer and distributor of television films through the February, 1960, purchase of Ziv Television Programs, Inc.

Sales in 1959 advanced 13% from those of the year before. Foreign film rentals paced the rise, but revenues from domestic rentals and from other company operations were also up. Narrower margins pared the gain in operating income to 11%. Earnings after taxes were equal to $2.47 per share against $2.22 per share in 1958, computed on the basis of the number of shares outstanding at the end of 1959. The earnings, in fact, represented a better than two-fold coverage of the $1.60 per share dividend paid, since the dividend is paid on only the shares held by the public.

In the first quarter of 1960, revenues were 20% ahead of those of the comparable year-earlier period, but share earnings fell to 47¢ against 51¢ as the result of an increase in the number of shares outstanding.

Revenues in 1960 will rise substantially, primarily reflecting the purchase of Ziv Television, a company which produces such TV staples as "Bat Masterson," "Highway Patrol," "Sea Hunt," and "Tombstone Territory." As for theatrical motion pictures, although only 34 releases were scheduled for 1960, compared with 40 in 1959, a far higher number of high-budget films will be included in the current year total. The year started quite auspiciously with the release of "On The Beach" and "Solomon and Sheba," both of which should be among the highest-grossing pictures in the company's history.

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*Floore, F. B.: Wine is Fine for Hospital Cookery, Mod. Hosp. 94:134 (June) 1960.

UNITED ARTISTS

Price	31⅜
Dividend	$1.60
Yield	5%
Trade	N.Y.S.E.

Capitalization

Long Term Dept	$36,205,556
Common Stock ($1 par)	1,224,218 shs.
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tion or about to go into production for release in 1961 and projects in various stages of development for 1962 and 1963 are laying the groundwork for further growth. Among the projects are pictures derived from four of the Number 1 best sellers over the past two years, namely "By Love Possessed," "Exodus," "Advise and Consent," and "Hawaii." Also in the works are films from four Broadway successes, "Two for the Seesaw," "West Side Story," "The Miracle Worker," and "Toys in the Attic."

All of the special divisions of United Artists showed growth in 1959. The record division, still in its development stage, and the Lopert Films division, devoted to the distribution of foreign-made films, increased their gross revenues substantially. UA-TV, devoted to the financing and distribution of films produeed for television release, successfully launched two network programs and a third in syndication. This operation has now been integrated with Ziv-United Artists. UAA, an affiliated company which distributes theatrical film to television, including the pre-1948 Warner Bros. library and various other features and cartoons, reduced its bank debt substantially and has made new three to five year contracts.

United Artists derives most of its income from the distribution of motion pictures produced by others to theatres in the U.S. and abroad. Movies are released through world-wide system of exchanges in return for 30% of a film's gross receipts in the U.S. and 40% abroad. Distribution in this country is effected through branches in 27 major cities and in Canada is handled by a wholly-owned subsidiary with six outlets. In the U.S. and Canada, about 70% of aggregate annual film rentals is derived from percentage engagements. Foreign distribution is through 126 exchanges.

The company procured financing for about 85% of its releases in 1958 either by use of its own funds or through guarantees of loans made by others. In return for procuring these funds, the company obtains a share in the picture's net profits, if any. Distribution rights usually run from seven to 10 years. There is no time limit for participation in profits.

For the long-term picture, results will largely reflect public response to films distributed, an unpredictable factor. However, constructive factors are that part of revenues derive from a flat fee basis, there are no studio overhead expenses, and the company's method of operations with producers, directors, actors, etc., is often on the basis of profit participation payable out of picture proceeds only after the cash has been recouped.

Metro-Goldwyn-Mayer

Our third company for perusal is Metro-Goldwyn-Mayer. This company (formerly Loew's, Inc.) is not only a major producer and distributor of motion pictures, but also operates foreign theatres, produces television film series, is engaged in phonograph record and music publishing businesses and derives substantial income by leasing old pictures to television.

The box office success of a number of new movies and rising revenues from growing television activities are boosting company sales and earnings this year. In addition, substantial cuts in overhead and production costs are aiding profit margins and a roster of promising new pictures and television programs indicate further gains for fiscal 1961.

In the fiscal three quarters ended June 9, gross revenues fell slightly to $97.1 million, from the $101.2 million posted in the similar 1959 period. The decline was due chiefly to a retarded schedule of film releases, adopted because of last year's strikes of actors and writers. Nonetheless, profits improved from $6.2 million, or $2.31 per share to $7.3 million, or $2.92 per share, on 6.5% fewer shares now outstanding. For all of fiscal 1960, ended August 31, net probably reached $3.75 per share compared with $2.91 last year. In fiscal 1961, moreover, earnings are likely to top $5 per share by a comfortable margin.

The breakdown of fiscal 1959 revenues was: rentals from the production and distribution of feature films and short subjects and foreign theatre operations, 72.6%; licensing pre-1949 movie films to television stations and the production of film series for showing on television, 11.4%; the sale of phonograph records un-

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1. Cameron, E.: The Use of Tofrānil in the Aged. Canad. Psychiat. A. J. Special Supplement, **4**: S160, 1959. 2. Christe, P.: Indications for Tofrānil in Geriatrics. Schweiz. med. Wchnschr. **90**: 586, 1960. 3. Schmied, J., and Ziegler, A.: Tofrānil in Geriatrics, Praxis **49**:472, 1960.

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der the M-G-M and Lion labels and music publishing interests, 9.1%; interest and other income, 4.3%; and net receipts of foreign film rentals blocked in prior years, 2.6%. It is interesting to note that the television portion of the pie, while grossing only 11.4%; added 45% to profits while the motion picture end of the business, grossing the above-mentioned 72.6%, contributed only 35% to profits.

MGM owns 62% of Robbins Music Corp. and its wholly-owned subsidiaries, Leo Feist, Inc. and Miller Music Corp. Hearst Metrotone News, which produces two of the three newsreels shown on the screen of American theatres, is 50% owned by MGM and 50% by The Hearst Corp., publishers.

Metro-Goldwyn-Mayer International, a wholly-owned subsidiary, operates 115 distribution offices in 54 foreign countries, together with 49 theatres in key population centers around the world. Approximately half of gross income from motion picture activities is derived from foreign sources. Some 63% of gross income from all company activities in fiscal 1959 was derived from the United States and Canada, 6% from other nations in the Western Hemisphere, 14% from Europe, 13% from the British Commonwealth and 4% from Asia and Africa.

Early last year, under the terms of a consent decree, the company divested itself of its theatre chains in the U.S. and Canada and stock holding in WMGM broadcasting activities. More than offsetting these losses, however, has been the reorganization initiated by a new management.

Since it assumed control three years ago, to illustrate, the company's vast studio and distribution facilities have been thoroughly streamlined. In consequence, fixed overhead costs have been trimmed by 25% from $32 million annually to $25 million. At the same time, entry into television has enlarged MGM's earnings potentials. Last year, gross revenues totaling $4 million were derived from MGM's TV series alone. This fall, two TV series will be produced, an hour-long program entitled "The Islanders" and "National Velvet," a half-hour show. Furthermore, 12 more programs are being developed and work is proceeding on a sizable TV commercial department.

Meanwhile, the company continues to profit handsomely from TV exposure of its pre-1949 film library. At the close of last year, $25 million already has been earned from this source and contracts were on the books for

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Price	38½	Capitalization	
Dividend	$1.20	Long Term Debt	$16,100,000
Yield	3.2%	Common Stock	2,505,100 shs.
Traded	N.Y.S.E.		

31.2 million more. Estimates as high as $100 million have been quoted as the ultimate return. After next year, however, revenues from pre-1949 films are expected to drop off.

MGM appears to have an asset of at least an equivalent value in its 350 film library of post-1949 movies, none of which has yet been displayed on television. Since the cost of nearly all these productions already has been amortized, and they are assigned no value on the company's balance sheet, they represent a hidden asset of large dimensions.

While release of the post-1949 films is not expected in the near future, new MGM productions for regular theatre outlets have been enjoying box office successes of their own. The firm has been cashing in on public preference for big spectacles, often based on proved literary or theatrical scripts, and featuring many stars. At the present time no fewer than six such mammoth projects are being filmed.

In addition, "Ben Hur," the company's Academy Award winning picture, appears likely to become the most profitable movie in MGM history. Costing perhaps $15 million to make, "Ben Hur" now appears slated to return several times that sum. Presently, the picture is playing in 63 domestic engagements, of which five are in Canada. Metro plans to open the film in 200 additional U.S. cities and 15 to 20 Canadian cities this fall. The picture will not be sent into general release, but will be offered on either a reserved seat basis or a reserved time basis.

Other films of which much is expected include H. G. Wells' "The Time Machine," "All The Fine Young Cannibals," starring Natalie Wood and Robert Wagner, "Cimarron," starring Glenn Ford, "Butterfield 8" with Elizabeth Taylor, and "Go Naked Before the World."

One other interesting sidelight is the possibility of oil revenues deriving from the company's properties. The Continental Oil Co., last November, brought in its first producing well on MGM's Culver City lot and others have been drilled since though their results haven't yet

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een pu olicized. Since fellow novie ı aker Twentieth Cen- ury-Fo last year added $250,- 00 fron oil royalties from its roperti s, it is possible that Metro w l also benefit from this lus fac or.

The ompany's finances are strong. On June 9, current assets totaled $111.8 million against current liabilities of $31.2 million, a current ratio of 3.6 to 1. Of course, a company with a strong cash position is always on the lookout for acquisition and this is also a possibility in the MGM case.

Coffee as a Food Allergen

True manifestations of allergy to coffee were seen in 4 patients, these including migraine, gastroenteritis, allergic rhinitis, and urticaria. Intolerance to caffeine was the most likely cause of symptoms noted in a fifth patient. In all 5 a cause-and-effect relationship was demonstrated by disappearance of symptoms when coffee was withdrawn and recurrence when it was reintroduced.

Green, M., *J.M. Soc. New Jersey*, 57:307-310, 1960.

even
"ladies"
like
cherry-flavored
VI-TYKE®
LIQUID MULTIVITAMINS

SYRUP—12 fl. oz. push-button can. Each 5 cc. teaspoonful contains: Vitamin A (Palmitate) 3,000 U.S.P. Units • Vitamin D 800 U.S.P. Units • Thiamine HCl (B_1) 1.5 mg. • Riboflavin (B_2) 1.5 mg. • Pyridoxine HCl (B_6) 1 mg. • Ascorbic Acid (C) 40 mg. • Vitamin B_{12} 3 mcgm. • Niacinamide 10 mg. • Pantothenic Acid (as Panthenol) 1 mg. • Methylparaben 0.08% • Propylparaben 0.02%. Also available in concentrated form:
PEDIATRIC DROPS—50 cc. bottle.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y.



Blood pressure that goes up with stre
often comes down with SERPASIL

(rese pine cua)

One reason that many cases of hypertension respond to Serpasil is that many cases are associated with stress. Stress situations produce stimuli which pass through the sympathetic nerves, constricting blood vessels, and increasing heart rate. Hyperactivity of the sympathetic nervous system may elevate blood pressure; if prolonged, this may produce frank hypertension. By blocking the flow of excessive stimuli to the sympathetic nervous system, Serpasil guards against stress-induced vasoconstriction, brings blood pressure down slowly and gently.

In mild to moderate ypertens
Serpasil is basic ther py, effe
alone ". . . in about 7) per ce
cases . . ."*

In severe hypertensio n, Serpa
valuable as a primer. B adjustin
patient to the physiol gic setti
lower pressure, it smoo hs the w
more potent antihyperte nsives.

In all grades of hypertension, Se
may be used as a back ground
By permitting lower dosage of
potent antihypertensives, Se
minimizes the incidence and se
of their side effects.

*Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M. A. 51:417 (Dec.) 1955.

Complete information available on request.



ela Tal ets *(Schering)*

ch tab t contains 350 mg. of risopro ol. *Indications:* For re- f of pa n, stiffness and spasm a wid variety of acute in- mmato y, traumatic and de- nerativ muscle and joint com- aints i cluding lumbosacral d sacr iliac strain, sprains, iplash injuries, bursitis and er simlar conditions. *Dosage:* e tablet three times daily and bedtime. *Supplied:* In bottles ntaining 30 tablets.

ctal Medicone-HC ppositories *(Medicone)*

ch suppository contains anes- sin 0.13 gm. (2 grains); ephe- ne hydrochloride 4.0 mg. /16 grain); oxyquinoline sul- e 0.016 gm. (¼ grain); zinc ide 0.194 gm. (3 grains); bal- m Peru 0.065 gm. (1 grain) and drocortisone acetate 10 mg. in um theobromatis. *Indications:* r relief of severe anorectal in- mmation, pruritus and pain in morrhoids, acute and chron- proctitis, postoperative edema, ptitis, pruritus ani and in- med postoperative scar tissue. *sage:* To be individualized. *pplied:* In boxes containing 12 ppositories.

►Cupertin Cream *(Cooper-Tinsley)*

Contains diphenylpyraline hydrochloride 2% in a non-staining, water-washable base. *Indications:* The cream is fungicidal and antipruritic in many mycotic infections of the skin. Particularly valuable in the treatment of *tinea pedis. Dosage:* Spread a thin film over the affected area once or twice daily. If the skin is broken, the initial application may cause a slight stinging sensation of brief duration. *Supplied:* In 15 gm. (½ ounce) tubes.

►Carbo-Dome Creme or Lotion *(Dome)*

Creme or lotion (pH 4.6) containing liquor carbonis detergens 5% in the *Acid Mantle* vehicle. *Indications:* Infantile eczema, nummular eczema, seborrheic dermatitis, psoriasis, atopic dermatitis, neurodermatitis, dyshidrosis and other chronic recalcitrant dermatoses. *Dosage:* Apply morning and night to affected areas. *Supplied:* Creme in 1 ounce tubes, Lotion in 2 fluid ounce bottles.



Dependable Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Bayer Aspirin is the most widely accepted brand of analgesic the world has ever known.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.



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errronor Prograva
apsules *(Nordson)*

ach cap ule contains 125 mg. of rroglyc e sulfate complex, 20 g. of el nental iron, 0.2 mg. of lic acid and nine other essen- al vitam ns and seven minerals. he cap les are phosphorus- ee. *Indi tions:* Vitamin-miner- supple nent that solves the roblem f iron-intolerance in regnancy. *Dosage:* One or two apsules daily. *Supplied:* In ottles co taining 90 capsules.

Robaxisal-PH Tablets
(Robins)

ach tablet contains 400 mg. of ethocarbamol, 97 mg. of phe- acetin, 81 mg. of acetylsalicylic id, 0.016 mg. of hyoscyamine lfate and 8.1 mg. (⅛ grain) of enobarbital. *Indications:* For lief of primary pain, for relaxa- on of spasm of voluntary uscles and associated pain and scomfort, especially when some xiety exists, and for relief of in due to arthritis, pain in the ck, myositis, as well as pain sociated with or due to spasm skeletal muscle. Also for ten- on headaches and other head- hes associated with muscular sion. *Dosage:* Adults, two tab- s four times daily is the sug- sted minimal dose. A total ly dosage may range from 3.2 gm. to 4.8 gm. of methocarbamol content (eight to 12 tablets) in divided doses, depending on the severity of the muscle spasm and associated pain. Children, dosage should range from 27 mg. to 33.5 mg. of methocarbamol per pound of body weight per day, divided into four to six doses. *Contraindications:* A known or suspected personal allergy, sensitivity, or strong idiosyncrasy to phenobarbital, acetylsalicylic acid, or other components in the formulation. *Supplied:* In bottles containing 100 or 500 tablets.

►Tetrex AP Syrup *(Bristol)*

Each 5 ml. teaspoonful contains 125 mg. of tetracycline (tetracycline activity measured as tetracycline hydrochloride), 120 mg. of acetyl-p-aminophenol (APAP) and 12.5 mg. of phenyltoloxamine citrate. *Indications:* For the symptomatic relief of the common cold and for the prevention of secondary bacterial infections of the upper respiratory tract (due to tetracycline sensitive organisms) which are frequently associated with the common cold and other viral respiratory infections. *Dosage:* Two teaspoonfuls (10 ml.) at onset of symptoms followed by two teaspoonfuls three or four times daily for three to five days. *Supplied:* In bottles of 2 fluid ounces.



Use of pHisoHex for washing the skin augments any other therapy for acne—brings better results. Now, pHisoAc Cream, a new acne remedy for topical application, suppresses and masks lesions—dries, peels and degerms the skin. Together, pHisoHex and pHisoAc provide **basic** complementary topical therapy for acne.

pHisoHex, antibacterial detergent with 3 per cent hexachlorophene, removes soil and oil better than soap—provides **continuous** degerming action when used often. pHisoHex is nonalkaline, nonirritating and hypoallergenic.

When pHisoAc Cream is used with pHisoHex washings, it unplugs follicles, helps prevent development of comedones, pustules and scarring. New pHisoAc Cream is flesh-toned, not greasy. It contains colloidal sulfur 6 per cent, resorcin 1.5 per cent, and hexachlorophene 0.2 per cent in a specially prepared base.

A new "self-help" booklet, **Teen-ager Have acne? Feel lonely?,** gives important **psychologic first aid** for patients with acne and describes the proper use of pHisoHex and pHisoAc. Ask your Winthrop representative for copies.

pHisoAc is available in 1½ oz. tubes and pHisoHex is available in 5 oz. plastic squeeze bottles and in bottles of 16 oz.

pHisoHex® and pHisoAc for acne

trademark

Winthrop LABORATORIES
New York 18, N.Y.

la-Man e Creme *(Dome)*

ntains docaine hydrochloride the *A d Mantle* vehicle. *In-cations:* itching or pain associ-d with eczemas, abrasions, morrho ls, pruritus ani, anal sures, nburn, minor burns, e nipp s, x-ray burns, poison , herpe zoster and other con-ions of he skin and accessible eous membranes. *Dosage:* ply lib rally as often as neces-y to control itching and pain. *pplied:* In ½ ounce tubes and unce tubes.

ctrol Tablets *(Flint, Eaton)*

tacid-vitamin tablets. Each blet contains 100 mg. of alumi-m hydroxide dried gel, 90 mg. calcium carbonate, 100 mg. of gnesium trisilicate, 90 mg. of gnesium oxide, 5 mg. of cal-m pantothenate plus vitamins C, B_1, B_2, B_6 and B_{12}. *Indica-ns:* To offset vitamin deficien-s in ulcer diets. *Dosage:* Two blets two hours after meals d whenever symptoms are esent. *Supplied:* In bottles con-ning 100 tablets.

in Inlay-Tabs
(Smith-Dorsey)

ch tablet contains triacetyl-andomycin equivalent to ole-domycin 125 mg., phenylprop-olamine hydrochloride, 12.5 mg., pheniramine maleate 6.25 mg., pyrilamine maleate 6.25 mg., calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. *Indications:* For the symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) and the prevention of secondary complications due to susceptible organisms. *Dosage:* Adults, two tablets four times daily. Therapy should be continued for at least 24 to 48 hours after fever and other symptoms subside. *Supplied:* In bottles containing 50 tablets.

Trib Vaginal Suppositories
(Roche)

Contains the microbicidal component *Triburon Chloride*, 0.1%. *Indications:* For control of vulvitis, vaginitis and related gynecologic conditions in which Trichomonas vaginalis, Candida albicans and Hemophilus vaginalis are causative organisms, and infections in which antibiotic-resistant staph. and strep. are implicated. *Dosage:* One suppository should be introduced into the vagina every morning and night for two weeks. If necessary, the course of therapy may be repeated. May be used during menstruation and pregnancy. *Supplied:* In boxes containing 24 suppositories with reusable plastic applicator.

►Rynatuss Tabules
(Irwin, Neisler)

Each tabule contains carbetapentane tannate (non-narcotic), 60 mg.; chlorpheniramine tannate, 5 mg.; ephedrine tannate, 10 mg.; phenylephrine tannate, 10 mg.; and employs the Durabond principle of oral repository release. *Indications:* For cough, mild or severe, acute or chronic. In head or chest congestion, colds, sinusitis, bronchitis. *Dosage:* Adults, one to two tabules every 12 hours. Children aged six to 11, ½ to one tabule every 12 hours. Twelve years and older, one to two tabules every 12 hours. *Supplied:* In bottles containing 30 tabules.

►Syncillin Pediatric Drops
(Bristol)

When reconstituted the bottle contains 7.2 ml., each dropperful (0.6 ml.) contains 125 mg. (200,000 units) of potassium phenethicillin (potassium penicillin-152). *Indications:* For the treatment of bacterial infections due to penicillin-sensitive organisms: Respiratory tract infections, skin, soft tissue and surgical infections, urinary tract infections, scarlet fever and puerperal sepsis. Not recommended for the treatment of syphilis, endocarditis or meningitis. Gram-negative organisms (with the exception of the Neiss ria) a the Rickettsiae are re istant this medication. *Dosag* : Reco mended dosage is 125 t 250 m every four to six hour depe ing upon the severity of the i fection and the age a d size the patient. When trea ng str tococcal and staphylo occal i fections, administratio sho be continued for at lea t 10 da *Supplied:* In bottles containi 1.5 gm. per bottle (125 mg. p 0.6 ml.).

►Becotin-T Tablets *(Lil*

Each tablet contains 15 mg. thiamine hydrochloride, 10 m of riboflavin, 5 mg. of pyridoxi hydrochloride, 100 mg. of ni tinamide, 20 mg. of pantothe acid (as calcium pantothena racemic), 4 mcg. of vitamin B (activity equivalent), 300 mg. ascorbic acid, and 125 mg. liver preparation and stomac tissue material, desiccated. *In cations:* For the increased nut tional needs of patients duri medical aftercare and before a afer surgery. Useful as a supp ment to low-salt, low calorie a low-cholesterol diets which m be lacking in B and C vitami *Dosage:* Usual dosage is one two tablets daily. *Supplied:* bottles containing 100 or 1 tablets, and in bulk packa containing 5000 tablets.

Intra-Osseous Venography

by Robert A. Schobinger, M.D., Clinical Instructor in Surgery, Albert Einstein College of Medicine New York; foreword by Philip J. Hodes, M.D. Grune & Stratton, New York and London. 1960. $14.50

This is an account of the making of new discoveries which have opened new fields of thought and investigation in diagnosis and treatment. Technical principles involved are given first consideration, then preliminary orders, injection sites for specific areas and contraindications to intra-osseous venography are considered. Anatomy, gross and microscopic, is reviewed and the technique of injection given in detail. The author uses the term "osteomyelography" to imply the opacification of the blood vessels in the medullary cavity of bone and outlines the clinical applications. There are chapters on Pterygoid Plexus Venography, Internal Mammary Venography, Azygography, Angiography of Extrathoracic Veins, Angiocardiography, Vertebral Plexus Venography, and on Application of the Technique to Various Other Anatomical Parts. The illustrations are plain and ample. The book also provides a guide for clinical interpretation of venograms obtained by the intra-osseous route.

►Diseases of the Newborn

by Alexander J. Schaffer, M.D., Associate Professor of Pediatrics, The Johns Hopkins Medical School; with a section on Neonatal Cardiology by Milton Markowitz, M.D., Assistant Professor of Pediatrics, The Johns Hopkins Medical School. W. B. Saunders Company, Philadelphia and London. 1960. $20.00

The expressed intention for this book was that it would be an Atlas of Diseases of the Newborn, and the intention has been carried out. It is a tome of some 900 pages making free use of illustrations, well supplemented by an adequate text. It may well be that a book dealing with diseases of the earliest years of life (exact number of years indeterminate) is long overdue. Certainly this book will fill a real need in supplying information dealing with the care of an ever increasing number of infants who survive the birth process very poorly equipped for surviving conditions in the outside world.

►The List Method of Psychotherapy

by Elizabeth Sher, Eleanor Messing, Theodora Hirschhorn, Enis Post, Annette Davis and Arthur Messing; with an introduction by Jacob S. List. Philosophical Library, New York. 1960. $7.50

The preface states that the List method has many novel and unique features and that the basic principle of the method consists in substitutions of "a program for a problem." The patient is trained not to condemn or avoid his own problems, but to face and solve them.

►Modern Treatment Yearbook 1960: A Yearbook of Diagnosis and Treatment for the General Practitioner

edited by Sir Cecil Wakeley, F.R.C.S., Fellow of King's College, London, 26th edition, published for The Medical Press by Bailliere, Tindall & Cox, Ltd., London, (in the U.S.A., The Williams & Wilkins Company, Baltimore). 1960. $7.50

This yearbook of treatment will be welcomed by many as affording reliable information on current British therapy for comparison and use along with knowledge of measures most popular in this country.

►On the Causation of Varicose Veins and their Prevention and Arrest by Natural Means: An Evolutionary Approach

by T. L. Cleave, M.R.C (Lond.), Surgeon Captain, R al Navy; with a foreword Harold Dodd, Ch.M., F.R.C John Wright & Sons Ltd., B tol. The Williams & Wilkins Baltimore, exclusive U.S. age 1960. $2.50

Certainly there is little enou known on the basic causation varicose veins, and certain every doctor would like to kn more about the prevention a cure. Many a doctor will w come an opportunity to impro his knowledge of this subject.

►The Office Assistant in Medical Practice

by Portia M. Frederick, I structor, Medical Office Assi ing, Long Beach City Colleg and Carol Towner, Director Special Services, Communic tions Division, American Medic Association. Second edition. B. Saunders Company, Philad phia and London. 1960. $5.25

The study of this book w greatly increase the efficiency a doctor's office assistants, a increase their usefulness to h and his patients.

THE CLASSICAL TREATMENT FOR VAGINAL MONILIASIS

HYVA

GENTIAN VIOLET

VAGINAL TABLETS

the only

SPECIFIC ANTIMYCOTIC VAGINAL TABLET WITH A GEL FORMING BASE

A vaginal therapy: Methylrosaniline chloride (gentian violet) has generally proved the most effective and specific agent for the treatment of vaginal candidiasis caused by the fungus Candida.

Hyva Gentian Violet Tablets virtually eliminate the principal disadvantages of present gentian violet preparations. They may be handled and used without staining and have psychological and aesthetic acceptance.

Hyva combines the fungicidal action of gentian violet (1.0 mgm.) with three active surface reducing agents and bactericides.* These active ingredients have been incorporated into a mildly effervescent "gel" forming base which provides for maximum and prolonged effectiveness. Shorter treatment time is required without the usual messiness normally experienced.

One tablet intravaginally for 12 nights. When necessary one tablet twice daily may be recommended. Patient should take a Nylmerate Solution water douche on arising and preceding next tablet application.

Prescribe Hyva Gentian Violet Tablets with applicator—boxes of 12 tablets.

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**Alkyldimethylbenzylammonium chloride (0.5 mgm.)*
Polyoxyethyleneonylphenol (10.0 mgm.)
Polyethlene Glycol Tert-Dodecylthioether (5.0 mgm.)

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►Diseases of the Skin

by James Marshall, M.D. (Lond.), Head of the Department of Dermatology, University of Stellenbosch Medical School. E. & S. Livingstone Ltd., Edinburgh and London. The Williams & Wilkins Co., Baltimore, exclusive U.S. agents. 1960. $15.00

The author undertook to provide a text that would serve both undergraduates and general practitioners. The arrangement is convenient, the text lucid and readable, and the illustrations complement the text admirably. The author has accomplished the very difficult task of writing an excellent dermatologic text which is not dry reading.

►A Textbook of Gynecology

by Laman A. Gray, M.D., F.A.C.S., F.A.C.O.G., Associate Professor of Obstetrics and Gynecology, University of Louisville Medical School, Louisville. Charles C Thomas, Springfield. 1960. $15.50

The purpose of this book is to present in a brief and clear manner a summary of present day gynecology, its object to remove the chaff from the grain, to make perusal easy and rapid, and to invite the instructor to individualize his own methods of teaching. Surely these are all worthy endeavors. The reader will appreciate not having to pay for description of the anatomy and physiology of the organs concerned. Some will and some will not appreciate the invention of the word "gynechiatry" to cover virginity, frigidity, sexual incompatibility, obesity, sexual deviation, sex instruction, and premarital counseling. The text is clear and explicit; the ample illustrations complement the text admirably. In this reviewer's opinion the author has accomplished what he set out to do.

►Office Diagnosis

by Paul Williamson, M.D. with illustrations by Ann Williamson. W. B. Saunders Company, Philadelphia and London. 1960. $12.50

This book is offered as a new approach to the problems of office diagnosis. The primary assumption is that "diagnosis partakes of philosophy and art fully as much as it does of science." No diagnostic test that cannot be made in a reasonably well appointed office is included. Very rare conditions and those not usually diagnosed in the office have been passed over entirely or given mention only.